



pD17-cJ-dCH2.H1

10 GACGGATCGG GAGATCTGCT AGGTGACCTG AGGCGCGCGG GCTTCGAATA GCCAGAGTAA CCTTTTTTTT TAATTTTATT TTATTTTATT 90  
CTGCCTAGCC CTCTAGACGA TCCACTGGAC TCCGCGCGCG CGAAGCTTAT CCGTCTCAIT GGAAAAAATA ATTAATAATAA AATAAATAAA  
100 TTTGAGATGG AGTTTGGCGC CGATCTCCCG ATCCCCCTATG GTCGACTCTC AGTACAAATCT GCTCTGATGC CGCATAGTTA AGCCAGTATC 180  
AAACTCTACC TCAAAACGCG GCTAGAGGGC TAGGGGATAC CAGCTGAGAG TCATGTTAGA CGAGACTACG GCGTATCAAT TCGGTCTATAG  
190 TGCTCCCTGC TTGTGCTGTTG GAGGTGCGTG AGTAGTGGC GAGCAAAAT TAAGCTACAA CAAGGCAAGG CTTGACCGAC AATTGCATGA 270  
ACGAGGGACG AACACACAAC CTCCAGCGAC TCATCAGCGC CTCGTTTTAA ATTGATGTT GTTCCGTTCC GAACTGGCTG TTAACGTACT  
280 AGAATCTGCT TAGGGTTAGG CGTTTTGCGG TGCTTCGCGA TGTTACGGCC AGATATACGC GTTGACATTG ATTATTGACT AGTTATTAAAT 360  
TCTTAGACGA ATCCCNATCC GCANAAACGG ACGAAGCGCT ACATGCCCCG TCTATATGCG CAATGTAACTGA TCAATAAATA  
370 AGTAATCAAT TAGGGGGTCA TTAGTTTCATA GCCCATATAT GCCCATATAC GGAGTTCCGC GTTACATAAC TTACGGTAAA TGGCCCCCT GGCTGACCCG 450  
TCAATTAGTTA ATGCCCCAGT AATCAAGTAT CCGGTATATA CCTCAAGGCG CAATGTATTG AATGCCATTT ACCGGCGCGA CCGACTGGCG  
460 CCAACGACCC CCGCCCATTG AGGTCAATAA TGACGTATGT TCCCATAGTA ACGCCAATAG GGACTTTCCA TTGACGTCA TGGGTGGACT 540  
GGTTGCTGGG GCGGGGTAAC TGCAGTTAAT ACTGCATACA AGGTATATCAT TCGGGTTATC CCTGAAAGGT AACTGCAGTT ACCCACCTGA  
550 AATTACGGTA AACTGCCCCAC TTGGCAGTAC ATCAAGTCTA TCAATATGCCA AGTACGCCCC CTATTGACGT CAATGACGGT AATGCGCCCG 630  
TAAATGCCAT TTGACGGGTG AACCGTCAAT TAGTTCACAT AGTATACGGT TCAATGCGGG GCATAACTGCA GTTACTGCCA TTTACCCGGC  
640 CCTGGCAITTA TGGCCAGTAC ATGACCTTAT GGGACTTTCC TACTTGGCAG TACATCTACG TATTAGTCAAT CGCTATTACC ATGGTGATGC 720  
GGACCGTAAT ACGGGTCAAT TACTGGAATA CCTGGAATA ATGAACCGTC ATGPAGATGC ATATACAGTA GCGATATGG TACCACCTACG  
730 GGTTTTGGCA GTACATCAAT GGGCGTGGAT ACGCGTTTGA CTTACGGGGA TTTCCAACTC TCCACCCCAT TGACGTCAAT GGGAGTTTGT 810  
CCAAAAACCGT CATGTAGTTA CCGGCACCTA TCGCCAACT TCGGTCCTCAG GAGTCCCCCT AAGGTTTCA AGGTGGGTA ACTGCAGTTA CCGTCAACA  
820 TTTGGCACCA AATCAACCG GACTTTTCCA AATGTCGTAA CAATCTCGCC CCAATTGACGC AAATGGCGG TAGGCGTGA CCGTGGGAGG 900  
AAACCGTGGT TTTAGTTGCC CTGAAAGGTT TTACAGCATT GTTGAGGCGG GGTAACTGCG TTTACCCGCC ATCCGCACAT GCCACCCCTC

FIGURE 14A  
(SEQ ID NO. 10)

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910      920      930      940      950      960      970      980      990
TCTATATAAG CAGAGCTCTC TGGCTTAACTA GAGAAGCCAC TGCTTACTGG CTTATCAAAA TTATATACGAC TCACATATAGG GAGACCCCAAG
AGATATATTC GTCTCGAGAG ACCGATGTGAT CTCCTGGGTG ACGAATGACC GAATAGCTTT AATTATGCTG AGTGATATCC CTTGGGTTC

1000      1010      1020      1030      1040      1050      1060      1070      1080
CTTGGTACCA ATTTAAATTG ATATCTCCTT AGGTCTCGAG TCCTCTAGATA ACCGGTCAAT CGATTGGAAT TCCTTGGCGCC GCTTGTCTAGC
GAACCATGGT TAAATTTAAC TATAGAGGAA TCCAGAGGTC AGAGATCTAT TGGCCAGTTA GCTAACCTTA AGAACGCCGG CGAACGATCG

1090      1100      1110      1120      1130      1140      1150      1160      1170
CACCATGGAG TTGTGGTTAA GCTTGGTCTT TCCTTGTCTT TGTTTAAAAA GGTTGTCAGT GTGAAGTGAA TCTGTGTGGAG TCTGGGGGAG
GTGGTACCTC AACACCAATT CGAACCCAGG AGGAACAGGA ACAAAATTTT CCACAGGTCA CACTTCACTT AGACCACCTC AGACCCCTC

1180      1190      1200      1210      1220      1230      1240      1250      1260
GCTTAGTGCA GCCTGGAGGG TCCCTGAAAG TCCTCTGTGT AACCTCTGGA TTCACCTTCA GTGACTATTA CATGTATTTG GTTGGCCAGA
CGAATCACGT CGGACCTCCC AGGACTTTC AGAGGACACA TTGGAGACCT AAGTGAAAGT CACTGATAAT GTACATAAAC CAACGGTCT

1270      1280      1290      1300      1310      1320      1330      1340      1350
CTCCAGAGAA GAGGTGGAG TGGGTGCGAT ACAATTAGTCA AGGTGTGTAT ATAAACCGACT ATCCAGACAC TGTAAGGGT CGATTCAACCA
GAGGTCTCTT CTCGACCTC ACCGACGTA TGTAATCAGT TCCACCACTA TATTGGCTGA TAGGTCTGTG ACATTTCCCA GCTAAGTGGT

1360      1370      1380      1390      1400      1410      1420      1430      1440
TCTCCAGAGA CAATGCCAAG AACACCTGT ACCTGTCAAT GAGCCGTCTG AAGTCTGAGG ACACAGGCAT GTATTACTGT GCAAGAGGCC
AGAGGTCTCT GTTACGGTTC TTGTGGACA TGGACGTTTA CTCGGCAGAC TTCAGACTCC TGTTGCGTA CATAATGACA CGTTCTCCGG

1450      1460      1470      1480      1490      1500      1510      1520      1530
TGGACGACGG GGCTGGTTT GCTTACTGGG GCCAAGGGAC TCCTGTACAG GTCTCTGTAG CTAGCACCAA GGGCCCATCG GTCTTCCCCC
ACCTGTCTCC CCGGACCAA CGAATGACCC CGGTTCCTG AGACCAGTGC CAGAGACATC GATCGTGGTT CCCGGGTAGC CAGAAGGGGG

1540      1550      1560      1570      1580      1590      1600      1610      1620
TGGCACCTC CTCCAAGAGC ACCCTGCGG GCACAGCGGC CCTGGGTGC CCTGTCAAGG ACTACTTCCC CGAACCGGTG ACGGTGTCTGT
ACCGTGGGAG GAGGTCTCG TGGAGACCCC CGTGTGCGCG GGACCCGACG GACCAGTTCC TGATGAAGGG GCTTGGCCAC TGCCACAGCA

1630      1640      1650      1660      1670      1680      1690      1700      1710
GGAACCTCAG CGCCCTGACC AGCGGCGTGC ACACCTTCCC GGCTGTCTTA CAGTCTCTCAG GACTCTACTC CCTCAGAGC GTGTCTACCG
CCTTGAGTCC GCGGACTGG TCGCCGACG TGTGGAAGGG CCGACAGGAT GTCAGGAGTC CTGAGATGAG GGAGTCTGCG CACCAGTGGC

1720      1730      1740      1750      1760      1770      1780      1790      1800
TGCCCTCCAG CAGCTTGGG ACCCAGACCT ACATCTGCAA CGTGATCAC AAGCCCCAGCA ACACCAAGGT GGACAAGAAA GTTGTGTAGA
ACGGGAGGTC GTGGAACCG TGGGTCTGGA TGTAGAGGTT GCACTTAGTG TTCCGGTCTGT TGTGTTCCA CCTGTCTTTT CAACCACTCT

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FIGURE 14B  
(SEQ ID NO. 10)

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1810	1820	1830	1840	1850	1860	1870	1880	1890
GGCAGCAC	GGGAGGAG	GTGTCTGT	GAAGCAGG	TCAGCGTC	TGCTTGAC	CATCCGGT	ATGCAGCC	AGTCCAGG
CCGTCGTG	CCCTCCCT	CACAGACG	CTTCGGTC	AGTCGGAG	ACGGACCT	GTAGGCCG	TACGCGGG	TCAGGTCCC
1900	1910	1920	1930	1940	1950	1960	1970	1980
AGCAAGCAG	GCCCCGTC	CCCTTCAC	CGGAGGCT	TGCCCCCC	ACTCATCT	AGGGAGGG	TCCTTCGG	TCTTCCCC
TCGTTCCGT	CGGGCAGC	GGAGAGTG	GCCTCGGG	ACGGCGGG	TGAGTAGG	TCCCTCTC	AGAGACCG	AAAGGGGT
1990	2000	2010	2020	2030	2040	2050	2060	2070
GCTCTGGCA	GGCACAGG	AGGTGCCCT	AACCCAGG	CTGCACAA	AGGGCAGG	GCTGGGCT	GACCTGCC	GAGCCATAT
CGAGACCCG	CCGTCTCC	TCCACGGG	TTGGGTCC	GACGTGTG	TCCCCGTC	CGACCCG	CTGGACGG	CTCGGTAT
2080	2090	2100	2110	2120	2130	2140	2150	2160
CGGAGGACC	CTGCCCTG	CCTAAGCC	CCCCAAGC	CATCTCTC	ACTCCCTC	CTCGGAC	TTCTCTCT	CCAGATTCC
GCCCTCCGT	GACGGGAC	GGATTGGG	GGGGTTTC	GTTTGAGG	TGAGGGAT	GAGCCTGT	AAGAGAGG	GGTCTAAG
2170	2180	2190	2200	2210	2220	2230	2240	2250
GTAACTC	ATCTCTCT	TGCAGAGC	AAATCTGT	ACAAACTC	CACATGCC	CCGTGCC	GTAAGCC	CCAGGCTC
CATTGAGG	TAGAGAG	ACGTCTCG	TTTAGAAC	TGTTTGTG	GTGTACGG	GGCACGG	CATTCCGT	GGTCCGAG
2260	2270	2280	2290	2300	2310	2320	2330	2340
CCCTCCAG	CAAGCGGG	CAGGTGCC	AGAGTAGC	GCATCCAG	ACACACAC	TGGGTACC	CATGTCCG	GCCACATG
GGAGGTG	GTTCGCCCT	GTCCACGG	TCTCATCG	CGTAGGTC	TGTGTGTG	ACCCATGT	GTACAGGC	CGGTGTAC
2350	2360	2370	2380	2390	2400	2410	2420	2430
CAGAGCCCG	CTCGGCCAC	CCCTTGCC	GAGAGTAG	GCTGTACC	CCTCTGTC	TACAGGG	CCCCGAGA	CACAGGTG
GTCTCCGCC	GAGCCGGT	GGAGACGG	CTCTCACT	CGACATGT	GGAGACAG	ATGTCCCG	GGGGCTCT	GTGTCCAC
2440	2450	2460	2470	2480	2490	2500	2510	2520
CACCTGCCC	CCATCCCGG	ATGAGCTG	CAAGAACG	GTCAGCCT	CTTCCCTG	CAAAGGCT	TATCCACG	ACATCGCG
GTGGGACGG	GGTAGGCCC	TACTCGAC	GTCTTGTG	CAGTCGGA	GGACGGAC	GTTTCCGA	ATAGGGTC	TGTAGCGC
2530	2540	2550	2560	2570	2580	2590	2600	2610
GGAGTGGAG	AGCAATGGG	AGCCGGAG	CAACTACG	ACCAGCCT	CCGTGCTG	CTCCGACG	TCCTTCTC	TCTACAGC
CCTCACCC	TCGTTACCC	TCGGCCCT	GTTGATGT	TGGTCCGG	GGCAGAC	GAGGCTCG	AGGAGAGG	AGATGTCT
2620	2630	2640	2650	2660	2670	2680	2690	2700
GCTCACCTG	GACAAGAG	GGTGGCAG	GGGGAACG	TTCTCATG	CCGTGATG	TGAGGCTC	CACAACCA	ACACGCAG
CGAGTGGC	CTGTTCTCG	CCACCGTC	CCCCCTCT	AAGATACG	GGCACTAC	ACTCCGAG	GTGTTGGT	TGTGCGCT

FIGURE 14C  
(SEQ ID NO. 10)

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2710 GAGCCTCTCC 2720 CTGTCTCCGG 2730 GTAAATGAGT 2740 GCGACGGCCG 2750 GCAAGCCCCC 2760 GCTCCCCGGG 2770 CTCTCGCGGT 2780 CGCAGCAGGA 2790 TGTCTGGCAC
CTCGGAGAGG GACAGAGGCC CATTTACTCA CGCTGCCGGC CGTTCGGGGG CGAGGGGCCC GAGAGCGCCA GCGTGTCTCT ACGAACCGTG

2800 GTACCCCCCTG 2810 TACATACTTC 2820 CCGGGCGCCC 2830 AGCATGGAAT 2840 TAAAGCACCC 2850 AGCGCTGCCC 2860 TGGGCCCTTG 2870 CGAGACTGTG 2880 ATGGTTCTTT
CATGGGGGAC ATGTATGAAG GGGCCGCGGG TCGTACCCTT ATTTCTGTGG TCGCGACGGG ACCCGGGGAC GCTCTGACAC TACCAAGAAA

2890 CCACGGGTCA 2900 GGCCGAGTCT 2910 GAGGCTGAG 2920 TGGCATGAGG 2930 GAGGCAGAGC 2940 GGGTCCCACT 2950 GTCCCCACAC 2960 TGGCCCCAGG 2970 TGTGCAAGTG
GGTGCCCACT CCGGCTCAGA CTCCGGACTC ACCGTACTCC CTCCGTCTCG GAGGCTGAGT GTCAGGGTGA CAGGGGTGTG ACCGGGTCCG ACACGTCCAC

2980 TGCCCTGGCC 2990 CCTAGGGTG 3000 GGGCTCAGCC 3010 AGGGCTGCC 3020 CTCGGCAGGG 3030 TGGGGGATTT 3040 GCCAGCGTGG 3050 CCTTCCCTCC 3060 AGCAGCACCT
ACGGACCCCG GGGATCCAC CCGGATCCAC CCGGATCCG TCCCGGACGG GAGCGTCCC ACCCCCTAAA CCGTCCGACC GGGAGGGAGG TCGTCTGTGA

3070 GCCCTGGGCT 3080 GGGCCACGGG 3090 AAGCCCTAGG 3100 AGCCCCTAGG 3110 GACAGACACA 3120 CAGCCCCCTG 3130 CTCTGTAGGA 3140 GACTGTCTCTG 3150 TTCTGTGAGC
CGGGACCCGA CCGGTGCC CCGGTGCC TCCGGGATCC TCCGGGATCC CTGTCTGTGT GTCTGTGTGT GAGACATCTT CTGACACAGGAC AAGACACTCG

3160 GCCCCCTGTC 3170 TCCCCGACCTC 3180 CATGCCCACT 3190 CCGGGGCGATG 3200 GTGCGTAGGG 3210 ACAGGCCCTC 3220 CCTCACCCAT 3230 CTACCCCCAC 3240 CTACCCCCAC
CGGGGACAGG AGGGCTGGAG GTACGGGTGA GCGGGGTGAC GCGGGGTGAC TACCCCTGTT TGGCTGAGG CCGTCCGGGAG GGAGTGGGTA GATGGGGGTG

3250 GGCACTAACC 3260 CCTGGCTGCC 3270 CTGCCAGGCC 3280 TCGCACCCGC 3290 ATGGGGACAC 3300 AACCAGACTC 3310 GGGGACATGC 3320 ACTCTCGGGC 3330 CCTGTGAGG
CCGTGATTGG GGACCGACGG GACGGGTGCG AGCGTGGCG TACCCCTGTT TGGCTGAGG CCGTCCGGGAG GGAGTGGGTA GATGGGGGTG

3340 GACTGTGCA 3350 GATGCCACA 3360 CACACACTCA 3370 GCGGTCGAGT 3380 GCGGTCGAGT 3390 GCGGTCGAGT 3400 TCCAAACCGG 3410 GCGGTCGAGT 3420 GCGGTCGAGT
CTGACCAACG CTACGGGTGT GTGTGTGAGT GTGTGTGAGT GTGTGTGAGT GTGTGTGAGT GTGTGTGAGT GTGTGTGAGT GTGTGTGAGT GTGTGTGAGT

3430 ACACGTGCAC 3440 GCCTCACA 3450 CCGGAGCTCA 3460 CCGGGGCGGA 3470 CTGCACAGCA 3480 CCCAGACCCAG 3490 AGCAAGGTCC 3500 TCGCACACGT 3510 GACACACTCT
TGTGCACGT CGGAGTGTGT GCCTCGGAGT GCGGCGGCTT GCGGCGGCTT GCGGCGGCTT GCGGCGGCTT GCGGCGGCTT GCGGCGGCTT GCGGCGGCTT GCGGCGGCTT

3520 CGGACACAGG 3530 CCCCCACGAG 3540 CCCCACGCGG 3550 CACCTCAAGG 3560 CCCACGAGCC 3570 TCTCGGCGAG 3580 TTCTCCACAT 3590 GCTGACCTGC 3600 TCAGACAAAC
GCCTGTGTCC GGGGTGTCTC GGGGTGTCTC GGGGTGTCTC GGGGTGTCTC GGGGTGTCTC GGGGTGTCTC GGGGTGTCTC GGGGTGTCTC GGGGTGTCTC

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FIGURE 14D  
(SEQ ID NO. 10)

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3610 CCAGCCCTCC TCTCACAAGG GTGCCCTGCG AGCCGCCACA CACACACAGG GGATCACACA CCACGTCACG TCCCTGGCCC TGGCCCACTT 3690
GGTCGGGAGG AGAGTGTTC CACGGGACG TCGGCGGTGT TCGGCGGTGT GTGTGTGTCG CCTAGTGTGT GTGTCACGCG AGGACCGGG ACCCGGTGAA

3700 CCCAGTGCCG CCCTTCCCTG CAGGACGGAT CAGCCCTGAC TGTCGCTTCT AGTTGCCAGC CATCTGTGTG TTGCCCTTCC CCCGTGCCCTT 3780
GGGTACGGC GGAAGGGAC GTCTGCTTA GTCCGAGTG GTCCGAGTG ACACGGAAGA TCAACGGTCG GTAGACAACA AACGGGAGG GGGCAGGAA

3790 CCTTGACCTT GGAAGGTGCC ACTCCACTG ACTCCACTG TCCCTTCCCTA ATAAATGAG GAAATTCGAT CGCATTTGCT GAGTAGGTGT CATCTATTCT 3870
GGAAC TGGA CCTTCCACGG TGAGGGTAC AGGAAAGGAT TAATTTTACTC TAATTTTACTC CCGTAACAGA CTCATCCACA GTAAGATAAG

3880 TGGGGGGTGG GGTGGGGCAG GACAGCAAGG GGGAGGATG GGAAGACAAT GGAAGGATG AGCAGGATG CTGGGATGC CTGGGCTCT ATGGCTTCTG 3960
ACCCCCACG CCACCCGTC CTGTGCTTCC CCGTCTTAAC CCGTCTTAAC CCGTCTTAAC TCGTCCGTAC GACCCCTAGC CCACCGAGA TACCGAAGAC

3970 AGCGGNAAG AACCATGCTG GGTCTTAGGG GGTATCCCCA CGCGCCCTGT AGCGGCGCAT TAAGCGCGG GGTGTGGTG GTTACGCGCA 4050
TCCGCTTTC TTGTCGACC CCGAGATCCC CCATAGGGGT CGCGGGACA CGCGGGTA TCGCGCGTA TCGCGCGG CACACACCAC CAATGCGCGT

4060 GCGTGACCGC TACACTTCCC AGCGCCCTAG CGCCCGCTCC TTTTCGCTTTC TTTCCCTTCT TTCTCGCCAC GTTCGCGGG CCTCTCAAAA 4140
CGCACTGGCG ATGTGAACGG TCGCGGGATC TCGCGGGATC GCGGGGAGG AAAGCGAAG AAGAGCGGTG CAAGCGGCGG CAAGCGGCGG GGAGAGTTT

4150 AAGGGA AAAA AAGCATGCAT CTCATTAGT CAGCAACCAT AGTCCCGCCC CTAACCTCCG CCATCCCGCC CCATCTCCG CCCAGTTCCG 4230
TTCCCTTTT TTCTGACGTA GAGTTAATCA GTCTGTTGTA TCAGGCGCGG GATTGAGCG GGTAGGCGG GGTAGGCG GGTCAAGGC

4240 CCCATTCTCC GCGCCATGGC TGACTAATTT TTTTATTATTA TGCAGAGGCC GAGGCGGCGT CCGGCTCTGA GCTATTCCAG AAGTAGTGAG 4320
GGGTAAGAGG CGGGGTACCG ACTGATTAA AAAATAAAT AAAATAAAT ACCTCTCCG CTCCGCGGGA CCGCGAGACT CGATAAGGTC TTCATCACTC

4330 GAGGCTTTT TGGAGGCCTA GCGTTTGTGA AAAAGCTTG ACAGCTCAGG GCTGCAATTT CGCGCAAAAC TTGACGGCAA TCTAGCGGTG 4410
CTCCGAAAAA ACCTCCGGAT CCGAAAAACG TTTTTCGAAC TTGTCAGTCC TGTCAGTCCG CTCCGCGGGA CCGCGAGACT CGATAAGGTC TTCATCACTC

4420 AAGGCTGGTA GGTATTATC CCGCTGCCA TCATGGTTCC ACCATTGAAC ACCATTGAAC CCGTGTCCCA AAATATGGG ATTTGGCAAGA 4500
TTCCGACCAT CCTAAAAATAG GGGGACGGT AGTACCAAGC TGTTAACTTG ACCTAGCAGC GGCACAGGGT TTTATACCCC TAACCGTTCT

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FIGURE 14E  
(SEQ ID NO. 10)

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4510	ACGGAGACCT	4520	ACCGTGGCCT	4530	CCGCTCAGGA	4540	ACGAGTTCAA	4550	GTAATTCCAA	4560	AGAAATGACCA	4570	CAACCTCTTC	4580	AGTGAAGGT	4590	AAACAGAAATC
	TGCCCTCTGA		TGGGACCGGA		GGCGAGTCCT		TGCTCAAGTT		CATGAAGGTT		TCCTACTGGT		GTTGGAGAAG		TCACCTTCCA		TTTGTCTTAG
4600	TGGTGATTAT	4610	GGGTAGGAAA	4620	ACCTGGTTCT	4630	CCATTCCTGA	4640	GAAGAAATCGA	4650	CCCTTAAAGG	4660	ACAGAAATTA	4670	TATAGTTCTC	4680	AGTAGAGAAC
	ACCACTAATA		CCCATCCTTT		TGGACCAAGA		GGTAAGGACT		CTTCTTAGCT		GGAATTTCC		TGCTCTTAAT		ATATCAAGAG		TCATCTCTTG
4690	TCAAAGAAC	4700	ACCACGAGGA	4710	GCTCATTTTC	4720	TTGCCAARAG	4730	TTTGGATGAT	4740	GCCTTAAAGAC	4750	TTATTTGAACA	4760	ACCGAAATTG	4770	GCAAGTAAAG
	AGTTTCTTGG		TGGTGCTCCT		CGAGTAAAG		AACGGTTTTC		AACTACTA		CGGAATTCG		AAATACTTGT		TGGCCTTAAC		CGTTCAATTC
4780	TAGACATGGT	4790	TTGGATAGTC	4800	GGAGGCAGTT	4810	CTGTTTACCA	4820	GGAAGCCATG	4830	AACTCAACCAG	4840	GCCACTTAG	4850	ACTCTTTGTG	4860	ACAAGGATCA
	ATCTGTACCA		AACCTATCAG		CCTCCGTCAA		GACAAATGGT		CCTTCGGTAC		TTAGTTGGTC		CGGTGGAATC		TGAGAAACAC		TGTTCTTAGT
4870	TGCAGGAATT	4880	TGAAAGTGAC	4890	ACGTTTTC	4900	CAGAAATGA	4910	TTTGGGAAA	4920	TATAAACTTC	4930	TCCCAAGATA	4940	CCCAGGCGTC	4950	CTCTCTGAGG
	ACGTCTCTAA		ACTTTCACG		TGCAAAAGG		GTCTTTAACT		AAACCCCTTT		ATATTTGAAG		AGGTCTTAT		GGTCCGCAG		GAGAGACTCC
4960	TCCAGGAGGA	4970	AAAAGGCATC	4980	AAGTATAAGT	4990	TTGAAGTCTA	5000	CGAGAAGAAA	5010	GACTAAACAGG	5020	AAGATGCTTT	5030	CAAGTTCTCT	5040	GCTCCCTCC
	AGGTCTCTCT		TTTTCCGTAG		TTTCATATCA		AACATCAGAT		GCCTCTCTTT		CTGATTTGTC		TTCTAGGAAA		GTTCAAGAGA		CGAGGGGAGG
5050	TAAAGCTATG	5060	CATTTTATA	5070	AGACCATGGG	5080	ACTTTGCTG	5090	GCTTTAGATC	5100	TCCTTTGTAA	5110	GGAACCTTAC	5120	TTCTGTGGTG	5130	TGACATNAAT
	ATTTGATAC		GTAATAATAT		TCTGGTACCC		TGAATAACGAC		CGAAATCTAG		AGAAACACTT		CCTTGGAAATG		AAGACACCAC		ACTGTATTAA
5140	GGACAAACTA	5150	CCTACAGAGA	5160	TTTAAAGCTC	5170	TAAGGTAAAT	5180	ATAAATTTT	5190	TAAGTGATA	5200	ATGTGTAA	5210	CTACTGATTC	5220	TAATGTGTTG
	CCTGTTTGAT		GGATGTCCT		AAATTTGAG		ATTCCATTTA		TATTTTAAA		ATTCACATAT		TACACAATTT		GATGACTAAG		ATTACAAAC
5230	TGTATTTTAG	5240	ATTCCAACCT	5250	ATGGAACCTGA	5260	TGAATGGGAG	5270	CAGTGGTGA	5280	ATGCTTTTAA	5290	TGAGGAAAAC	5300	CTGTTTGTCT	5310	CAGAAGAAAT
	ACATAAAATC		TAAGTTTGA		TACCTTGACT		ACTTACCCTC		GTCACCACCT		TACGGAATTT		ACTCTTTTG		GACAAAACGA		GTCTTCTTTA
5320	GCCATCTAGT	5330	GATGATGAGG	5340	CTCTCAACAT	5350	CTCTGCTGTA	5360	TCCTACTCCTC	5370	CAAAAAGAA	5380	GAGAAAGGTA	5390	GAAGACCCCA	5400	AGGACTTTCC
	CGGTAGATCA		CTACTACTCC		GATGACGACT		GAGAGTTGTA		AGATGAGGAG		GTTTTTCTT		CTCTTTCCAT		CTTCTGGGGT		TCCTGAAAGG

FIGURE 14F  
(SEQ ID NO. 10)

FIGURE 14G  
(SEQ ID NO. 10)

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6310      6320      6330      6340      6350      6360      6370      6380      6390
CTTCCAGTC  GGGAAACCTG  TCGTGCCACG  TGCATTAATG  AATCGGCCAA  CGCGCGGGA  GAGGCGGTTT  GCGTATTGGG  CGCTCTTCCG
GAAAGGTCAG  CCTTTGGAC  AGCAGGGTGC  ACCTAATTAC  TTAGCGGGTT  GCGCGCCCT  CTCGCCCAA  CGCATAACCC  GCGAGAAGGC

6400      6410      6420      6430      6440      6450      6460      6470      6480
CTTCTCGCT  CACTGACTCG  CTGCGCTCGG  TCGTTCCGGT  GCGGCGAGCG  GTATACGCTC  ACTCAAAGGC  GGTAAATACG  TTATCCACAG
GAAGGAGCGA  GTGACTGAGC  GACCGGAGCC  AGCAAGCCGA  CCGCGCTCGC  CATAGTCGAG  TGAGTTTCCG  CCATTATGCC  AATAGGTCTC

6490      6500      6510      6520      6530      6540      6550      6560      6570
AATCAGGGGA  TAACGCGAGG  AAGAACATGT  GAGCAAAAGG  CCAGCAAAAG  OCCAGGAACC  GTAAAAGGC  GCGGTGCTG  GCGTTTTCCT
TTAGTCCCTT  ATTCCGTCTT  TTCTTGTA  CTTGTTTCC  GGTGTTTTC  CCGTCCCTGG  CATTTTCCG  GCGCAACGAC  CGCAAAAAGG

6580      6590      6600      6610      6620      6630      6640      6650      6660
ATAGGCTCCG  CCCCCTGAC  GAGCATACCA  AAAATCGACG  CTCAAAGTCAG  AGGTGGCGAA  ACCCGACAGG  ACTATAAAGA  TACCAGGCGT
TATCCGAGGC  GGGGGACTG  CTCGTAGTGT  TTTTAGCTGC  GAGTTCAATC  TCCACCGCTT  TGGGCTGTCC  TGNATTTTCT  ATGCTCCGCA

6670      6680      6690      6700      6710      6720      6730      6740      6750
TTCCCCCTGG  AAGCTCCCTC  GTGCGCTCTC  GTGTTCCGAC  CCTGCCGCTT  ACCGGATACC  TGTCCCGCTT  TCCTCCCTTCG  GGAAGCGTGG
AAGGGGACC  TTCGAGGGAG  CACGCGAGAG  GACAAAGCTG  GACAAAGCTG  TGGCCTATGG  ACAGGCGGAA  AGAGGGAAAG  CCTTCGCACC

6760      6770      6780      6790      6800      6810      6820      6830      6840
CGCTTCTCA  ATGCTCACGC  TGTAGGTATC  TCAGTTTCGT  GTAGGTCTGT  CGCTCCAGC  TGGGCTGTGT  GCACGAACCC  CCCGTTACGC
CGGAAGAGT  TACGAGTGG  ACATCCATAG  AGTCAAGCCA  CATCCAGCAA  GCGAGGTTCC  ACCCGACACA  CGTCTTGGG  GGGCAAGTGG

6850      6860      6870      6880      6890      6900      6910      6920      6930
CCGACCGCTG  CGCCTTATCC  GGTAACATATC  GTCTTGATGC  CAACCCGGTA  AGACACGACT  TATCCGCCACT  TATCCGCCACT  ACTGTAACA
GGCTGGCGAC  GCGGAATAGG  CCATTGATAG  CAGAACTCAG  GATGCTCAA  GAACTTCACC  ACCGGATTGA  ATAGCGGTGA  CCGTCTGTCG  TGACCATTTGT

6940      6950      6960      6970      6980      6990      7000      7010      7020
GGATTAGCAG  AGCGAGGTAT  GTAGGCGGTG  CTACAGAGTT  CTTGAAGTGG  TGGCCTNACT  ACGGCTACAC  TAGAAGGACA  GTATTGTTGA
CCTAATCGTC  TCGCTCCATA  CATCCGCCAC  GATGCTCAA  GAACTTCACC  ACCGGATTGA  TGGCGATGTG  ATCTTCTCTGT  CATAAACCCAT  CATAAACCCAT

7030      7040      7050      7060      7070      7080      7090      7100      7110
TCTGCGCTCT  GCTGAAGCCA  GTTACCTTCG  GAAAAAGAGT  TGGTAGCTCT  TGAATCCGCA  AACAAACCAC  CGCTGGTAGC  GGTGCTTTT
AGACGCGAGA  CGACTTCGGT  CAATGGAGC  CTTTTCCTCA  ACCATCGAGA  ACTAGGCCGT  TTGTTTGGTG  GCGACCATCG  CCACCAAAA  CCACCAAAA

7120      7130      7140      7150      7160      7170      7180      7190      7200
TTGTTTGCAA  GCGACGAGTT  ACGGCGAGAA  AAAAAGGATC  TCAAGAAGAT  CCTTGTGATCT  TTCTPACGGG  GTCTGACGCT  CAGTGGAAAG
AACAAACGTT  CCGCTCTTAA  TCGCGCTCTT  TTTTCTCTAG  AGTTCTTCTA  GGAACACTAGA  AAGATGCC  CAGACTGCGA  GTCACCTTGC

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FIGURE 14H  
(SEQ ID NO. 10)



pD17-cJ-dCH2.H1

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7210 AAAACTCAGG TTAAGGATT TTGGTCATGA GATTATCAA AAGGATCTTC ACCTAGATCC TTTTAAATTA AAAATGAAGT TTTAAATCAA 7290
TTTTGAGTGC AATTCCTTAA AACCAGTACT CTAATAGATT TTCTTAGAAG TGGATCTAGG AAAATTTAAT TTTTACTTCA AATTTAGTT
7300 TCTAAGTAT ATATGAGTAA ACTTGGTCTG ACAGTTACCA ATGCTTAATC AGTGAGGCAC CTAATCTCAG GATCTGTCTA TTTCTGTTTCAAT 7380
AGATTTTCATA TATACTCATT TGAACCCAGAC TGTCAAATGGT TACGAATTAG TCACCTCCGIG GATAGAGTGC CTAGACAGAT AAGCAAGTA
7390 CCATAGTTGC CTGACTCCCC GTCTGTGTAGA TAACTACGAT ACGGGAGGGC TTACCAATCTG GCCCAAGTGC TGCANTGATA CCGCAGAGACC 7470
GGTATCAACG GACTGAGGGG CAGCACATCT ATTGATGCTA TGCCCTCCCG ATGGTAGAC CCGGCTCAGC ACGTTACTAT GCGGCTCTGG
7480 CACGTCACC GGTCTCAGAT TTATCAACAA TAAACCAACC AGCCGGAAGG GCCGAGCGCA GAAGTGGTCC TGCACCTTAA TCCGCTCTCA 7560
GTCCGAGTGG CCGAGGTCTA AATAGTCTGT ATTGGTCTGG TCGCCCTTCC CCGCTCCGCT CTTCCACCAGG ACGTTGAAAT AGCGGAGGT
7570 TCCAGTCTAT TAATCTTTCG CCGGAAGCTA GAGTAAGTAG TTCCGCCAGTT AATAGTTTGC GCAAGTGTGT TGCCATTTGCT ACAGGCATCG 7650
AGGTCAGATA ATTACAACG GCCCTTCGAT CTCATTTCATC AAGCGGTCAA TTATCAAAACG CGTTGCAACA ACGGTAACGA TGTCCGTAGC
7660 TGGTGTACAG CTCGTCTGTT GGTATGGCTT CATTACAGTC CGGTTCCCAA CGATCAAGGC GAGTTACATG ATCCCCCATG TTGTGCAAAA 7740
ACCACAGTGC GAGCAGCAA CCATACGAA GTAAGTCAG GCAAGGGTT GCTAGTTCCG CTCAATGTAC TAGGGGTAC AACAGTTT
7750 AAGCGGTTAG CTCCTTTCGGT CCTCCGATCG TTGTCAGAAG TAAAGTTGGCC GCAGTGTATT CACTCATGTT TATGCGACGA CTGCATAATT 7830
TTCGCCAATC GAGGAAGCCA GGAGGCTAGC AACAGTCTTC ATTCAACCCG CGTCACAATA GTGAGTACCA ATACCGTCTG GACGTATTAA
7840 CTCCTTACTGT CATGCCATCC GTAAGATGCT TTCTGTGAC TGGTGTAGTAC TCAACCAAGT CATCTGTAGA ATAGTGTATG CCGGACCGA 7920
GAGAATGACA GTACGGTAGG CATTCTACGA AAAGACATG ACCACTCATG AGTTGGTTCA GTAAAGACTCT TATCACATAC GCCGCTGGCT
7930 GTTGTCTTTG CCCGGGTCA ATACGGGATA ATACCGGCCC ACATAGCAGA ACTTTAAAG TGCTCATCAT TCGAAACGT TGTTCGGGGC 8010
CAACGAGAAC GGGCCGCAGT TATGCCCTAT TATGGCGCGG TGTATCGTCT TGAATTTTC ACGAGTAGTA ACCTTTGTCA AGAAGCCCCG
8020 GAAACTCTC AAGGATCTTA CCGCTGTGA GATCCAGTTC GATGTAACCC ACTCGTGCAC CCAACTGATC TTCAGCATCT TTTACTTTCA 8100
CTTTTGAGAG TTCCTAGANT GCGACAACT CTAGGTCAAG CTACATTGGG TGACACGCTG GGTGACTAG AAGTCGTAGA AATGAAAGT

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FIGURE 14I  
(SEQ ID NO. 10)

pD17-cJ-dCH2.H1

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8110      8120      8130      8140      8150      8160      8170      8180      8190
CCAGCGTTTC TGGGTGAGCA AAAACAGGAA GGC AAAATGC CGCAAAAAG GGAATAAGG CGACACGGAA ATGTTGAATA CTCATACTCT
GGTCGCAAAG ACCCAGTCGT TTTTGTCCTT CCGTTTACG CCGTTTTC CCTTATTTCC GCTGTGCTT TACAACCTTAT GAGTATGAGA

8200      8210      8220      8230      8240      8250      8260      8270      8280
TCCTTTTTTCA ATATTATTGA AGCATTTATC AGGGTTATTG TCTCATGAGC GGATACATAT TTGAATGTAT TTAGAAAAAT AAACAATATAG
AGGAAAAAGT TATAANTAAT TCGTAAATAG TCCCAATAAC AGAGTACTCG CCTATGTATA AACTTACATA ATCTTTTTTA TTGTGTTATC

8290      8300      8310      8320      8330
GGGTCCGGC CACATTTCCC CGAAAAGTGC CACCTGACGT C
CCCAAGGCGC GTGTAAAGG GCTTTTCACG GTGGACTGCA G
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FIGURE 14J  
SEQ ID NO. 10)

FIGURE 18A (SEQ ID NO. 22)

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1  GGTACCAATT TAAATTGATA TCTCCTTAGG TCTCGAGTCT CTAGATAACC
51  GGTCAATCGA TTGGAATTCT TGCGGCCGCT TGCTAGCCAC CATGGAGTTG
101 TGGTTAAGCT TGGTCTTCCT TGTCTTGTT TTAAGAGTG TCCAGTGTGA
151 AGTGCAACTG GTGGAGTCTG GGGGAGGCTT AGTGCAGCCT GGAGGGTCCC
201 TGCGACTTTC CTGTGCTGCA TCTGGATTCC CGTTCAGTGA CTATTACATG
251 TATTGGGTTC GCCAGGCTCC AGGCAAGGGA CTGGAGTGGG TCTCATACAT
301 TAGTCAAGAT GGTGATATAA CCGACTATGC AGACTCCGTA AAGGGTCTGAT
351 TCACCATCTC CAGAGACAAT GCAAAGAACA GCCTGTACCT GCAAATGAAC
401 AGCCTGAGGG ACGAGGACAC AGCCGTGTAT TACTGTGCAA GAGGCCTGGC
451 GGACGGGGCC TGGTTTGCTT ACTGGGGCCA AGGGACTCTG GTCACGGTCT
501 CTTCCGCTAG CACCAAGGGC CCATCGGTCT TCCCCCTGGC ACCCTCCTCC
551 AAGAGCACCT CTGGGGGCAC AGCGGCCCTG GGCTGCCTGG TCAAGGACTA
601 CTTCCCCGAA CCGGTGACGG TGTCGTGGAA CTCAGGCGCC CTGACCAGCG
651 GCGTGACAC CTTCCCGGCT GTCCTACAGT CCTCAGGACT CTACTCCCTC
701 AGCAGCGTGG TCACCGTGCC CTCCAGCAGC TTGGGCACCC AGACCTACAT
751 CTGCAACGTG AATCACAAGC CCAGCAACAC CAAGGTGGAC AAGAAAGTTG
801 GTGAGAGGCC AGCACAGGGA GGGAGGGTGT CTGCTGGAAG CCAGGCTCAG
851 CGCTCCTGCC TGGACGCATC CCGGCTATGC AGCCCCAGTC CAGGGCAGCA
901 AGGCAGGCCC CGTCTGCCTC TTCACCCGGA GGCCTCTGCC CGCCCCACTC
951 ATGCTCAGGG AGAGGGTCTT CTGGCTTTTT CCCCAGGCTC TGGGCAGGCA
1001 CAGGCTAGGT GCCCCTAACC CAGGCCCTGC ACACAAAGGG GCAGGTGCTG
1051 GGCTCAGACC TGCCAAGAGC CATATCCGGG AGGACCCTGC CCCTGACCTA
1101 AGCCCACCCC AAAGGCCAAA CTCTCCACTC CCTCAGCTCG GACACCTTCT
1151 CTCCTCCAG ATTCCAGTAA CTCCCAATCT TCTCTCTGCA GAGCCCAAAT
1201 CTTGTGACAA AACTCACACA TGCCACCGT GCCCAGGTAA GCCAGCCCAG
1251 GCCTCGCCCT CCAGCTCAAG GCGGGACAGG TGCCCTAGAG TAGCCTGCAT
1301 CCAGGGACAG GCCCCAGCCG GGTGCTGACA CGTCCACCTC CATCTCTTCC
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1351 TCAGCACCTG AACTC<sup>235</sup>~~CTGG~~ <sup>237</sup>~~GGAC~~CGTCA GTCTTCCTCT TCCCCCAAA  
 1401 ACCCAAGGAC ACCCTCATGA TCTCCCGGAC CCCTGAGGTC ACATGCGTGG  
 1451 TGGTGGACGT GAGCCACGAA GACCCTGAGG TCAAGTTCAA CTGGTACGTG  
 1501 GACGGCGTGG AGGTGCATAA TGCCAAGACA AAGCCGCGGG AGGAGCAGTA  
 1551 CAACAGCACG TACCGTGTGG TCAGCGTCCT CACCGTCCTG CACCAGGACT  
 1601 GGCTGAATGG CAAG<sup>318</sup>~~GAGTAC~~ <sup>320</sup>~~AAGTGC~~<sup>322</sup>~~AAGG~~ TCTCCAACAA AGCCCTCCCA  
 1651 GCC<sup>331</sup>~~CCC~~ATCG AGAAAACCAT CTCCAAAGCC AAAGGTGGGA CCCGTGGGGT  
 1701 GCGAGGGCCA CATGGACAGA GGCCGGCTCG GCCCACCTC TGCCCTGAGA  
 1751 GTGACCGCTG TACCAACCTC TGTCCCTACA GGGCAGCCCC GAGAACCACA  
 1801 GGTGTACACC CTGCCCCCAT CCCGGGATGA GCTGACCAAG AACCAGGTCA  
 1851 GCCTGACCTG CCTGGTCAAA GGCTTCTATC CCAGCGACAT CGCCGTGGAG  
 1901 TGGGAGAGCA ATGGGCAGCC GGAGAACAAC TACAAGACCA CGCCTCCCGT  
 1951 GCTGGACTCC GACGGCTCCT TCTTCCTCTA CAGCAAGCTC ACCGTGGACA  
 2001 AGAGCAGGTG GCAGCAGGGG AACGTCTTCT CATGCTCCGT GATGCATGAG  
 2051 GCTCTGCACA ACCACTACAC GCAGAAGAGC CTCTCCCTGT CTCCGGGTAA  
 2101 ATGAGTGC GA CGGCCGGCAA GCCCCGCTC CCCGGGCTCT CGCGGTGCGA  
 2151 CGAGGATGCT TGGCACGTAC CCCCTGTACA TACTTCCCGG GCGCCCAGCA  
 2201 TGGAAATAAA GCACCCAGCG CTGCCCTGGG CCCCTGCGAG ACTGTGATGG  
 2251 TTCTTTCCAC GGGTCAGGCC GAGTCTGAGG CCTGAGTGGC ATGAGGGAGG  
 2301 CAGAGCGGGT CCCACTGTCC CCACACTGGC CCAGGCTGTG CAGGTGTGCC  
 2351 TGGGCCCCCT AGGGTGGGGC TCAGCCAGGG GCTGCCCTCG GCAGGGTGGG  
 2401 GGATTGCGCA GCGTGGCCCT CCCTCCAGCA GCACCTGCCC TGGGCTGGGG  
 2451 CACGGGAAGC CCTAGGAGCC CCTGGGGACA GACACACAGC CCCTGCCTCT  
 2501 GTAGGAGACT GTCCTGTTCT GTGAGCGCCC CTGTCCTCCC GACCTCCATG  
 2551 CCCACTCGGG GGCATGCCTA GTCCATGTGC GTAGGGACAG GCCCTCCCTC  
 2601 ACCCATCTAC CCCACGGCA CTAACCCCTG GCTGCCCTGC CCAGCCTCGC  
 2651 ACCCGCATGG GGACACAACC GACTCCGGGG ACATGCACTC TCGGGCCCTG  
 2701 TGGAGGGACT GGTGCAGATG CCCACACACA CACTCAGCCC AGACCCGTTT  
 2751 AACAAACCCC GCACTGAGGT TGGCCGGCCA CACGGCCACC ACACACACAC  
 2801 GTGCACGCCT CACACACGGA GCCTACCCG GGCGAACTGC ACAGCACCCA

FIGURE 18B (SEQ ID NO. 22)

2851 GACCAGAGCA AGGTCCTCGC ACACGTGAAC ACTCCTCGGA CACAGGCCCC  
2901 CACGAGCCCC ACGCGGCACC TCAAGGCCCA CGAGCCTCTC GGCAGCTTCT  
2951 CCACATGCTG ACCTGCTCAG ACAAACCCAG CCCTCCTCTC ACAAGGGTGC  
3001 CCCTGCAGCC GCCACACACA CACAGGGGAT CACACACCAC GTCACGTCCC  
3051 TGGCCCTGGC CCACTTCCCA GTGCCGCCCT TCCCTGCAGG ACGGATCAGC  
3101 CTCGACTGTG CCTTCTAGTT GCCAGCCATC TGTTGTTTGC CCCTCCCCCG  
3151 TGCCTTCCTT GACCCTGGAA GGTGCCACTC CCACTGTCCT TTCCTAATAA  
3201 AATGAGGAAA TTGCATCGCA TTGTCTGAGT AGGTGTCATT CTATTCTGGG  
3251 GGGTGGGGTG GGGCAGGACA GCAAGGGGGA GGATTGGGAA GACAATAGCA  
3301 GGCATGCTGG GGATGCGGTG GGCTCTATGG CTTCTGAGGC GGAAAGAACC  
3351 AGCTGGGGCT CTAGGGGGTA TCCCCACGCG CCCTGTAGCG GCGCATTAAAG  
3401 CGCGGCGGGT GTGGTGGTTA CGCGCAGCGT GACCGCTACA CTTGCCAGCG  
3451 CCCTAGCGCC CGCTCCTTTC GCTTTCTTCC CTTCTTTCT CGCCACGTTC  
3501 GCCGGGCCTC TCAAAAAAGG GAAAAAAGC ATGCATCTCA ATTAGTCAGC  
3551 AACCATAGTC CCGCCCCTAA CTCCGCCCAT CCGCCCCTA ACTCCGCCCA  
3601 GTTCCGCCCA TTCTCCGCCC CATGGCTGAC TAATTTTTTT TATTTATGCA  
3651 GAGGCCGAGG CCGCCTCGGC CTCTGAGCTA TTCCAGAAGT AGTGAGGAGG  
3701 CTTTTTTTGA GGCCTAGGCT TTTGCAAAAA GCTTGGACAG CTCAGGGCTG  
3751 CGATTTTCGG CCAAACCTGA CGGCAATCCT AGCGTGAAGG CTGGTAGGAT  
3801 TTTATCCCCG CTGCCATCAT GGTTCGACCA TTGAACTGCA TCGTCGCCGT  
3851 GTCCCAAAAT ATGGGGATTG GCAAGAACGG AGACCTACCC TGGCCTCCGC  
3901 TCAGGAACGA GTTCAAGTAC TTCCAAAGAA TGACCACAAC CTCTTCAGTG  
3951 GAAGGTAAAC AGAATCTGGT GATTATGGGT AGGAAAACCT GGTTCCTCCAT  
4001 TCCTGAGAAG AATCGACCTT TAAAGGACAG AATTAATATA GTTCTCAGTA  
4051 GAGAACTCAA AGAACCACCA CGAGGAGCTC ATTTTCTTGC CAAAAGTTTG  
4101 GATGATGCCT TAAGACTTAT TGAACAACCG GAATGGCAA GTAAAGTAGA  
4151 CATGGTTTGG ATAGTCGGAG GCAGTTCTGT TTACCAGGAA GCCATGAATC  
4201 AACCAGGCCA CCTTAGACTC TTTGTGACAA GGATCATGCA GGAATTTGAA  
4251 AGTGACACGT TTTTCCAGA AATTGATTG GGGAAATATA AACTTCTCCC  
4301 AGAATACCCA GGCGTCCTCT CTGAGGTCCA GGAGGAAAAA GGCATCAAGT

FIGURE 18C (SEQ ID NO. 22)

4351 ATAAGTTTGA AGTCTACGAG AAGAAAGACT AACAGGAAGA TGCTTTCAAG  
4401 TTCTCTGCTC CCCTCCTAAA GCTATGCATT TTTATAAGAC CATGGGACTT  
4451 TTGCTGGCTT TAGATCTCTT TGTGAAGGAA CCTTACTTCT GTGGTGTGAC  
4501 ATAATTGGAC AAACCTACCTA CAGAGATTTA AAGCTCTAAG GTAAATATAA  
4551 AATTTTTTAAG TGTATAATGT GTTAAACTAC TGATTCTAAT TGTTTGTGTA  
4601 TTTTAGATTTC CAACCTATGG AACTGATGAA TGGGAGCAGT GGTGGAATGC  
4651 CTTTAATGAG GAAAACCTGT TTTGCTCAGA AGAAATGCCA TCTAGTGATG  
4701 ATGAGGCTAC TGCTGACTCT CAACATTCTA CTCCTCCAAA AAAGAAGAGA  
4751 AAGGTAGAAG ACCCCAAGGA CTTTCCTTCA GAATTGCTAA GTTTTTTGAG  
4801 TCATGCTGTG TTTAGTAATA GAACTCTTGC TTGCTTTGCT ATTTACACCA  
4851 CAAAGGAAAA AGCTGCACTG CTATACAAGA AAATTATGGA AAAATATTCT  
4901 GTAACCTTTA TAAGTAGGCA TAACAGTTAT AATCATAACA TACTGTTTTT  
4951 TCTTACTCCA CACAGGCATA GAGTGTCTGC TATTAATAAC TATGCTCAAA  
5001 AATTGTGTAC CTTTAGCTTT TTAATTTGTA AAGGGGTAA TAAGGAATAT  
5051 TTGATGTATA GTGCCTTGAC TAGAGATCAT AATCAGCCAT ACCACATTG  
5101 TAGAGGTTTT ACTTGCTTTA AAAAACCTCC CACACCTCCC CCTGAACCTG  
5151 AAACATAAAA TGAATGCAAT TGTGTGTGTT AACTTGTTTA TTGCAGCTTA  
5201 TAATGGTTAC AAATAAGCA ATAGCATCAC AAATTTTACA AATAAAGCAT  
5251 TTTTTTCACT GCATTCTAGT TGTGGTTTGT CCAAATCAT CAATGTATCT  
5301 TATCATGTCT GGATCGGCTG GATGATCCTC CAGCGCGGGG ATCTCATGCT  
5351 GGAGTTCTTC GCCCACCCCA ACTTGTTTAT TGCAGCTTAT AATGGTTACA  
5401 AATAAAGCAA TAGCATCACA AATTTACAA ATAAAGCATT TTTTTCCTG  
5451 CATTCTAGTT GTGGTTTGTG CAAACTCATC AATGTATCTT ATCATGTCTG  
5501 TATACCGTCG ACCTCTAGCT AGAGCTTGGC GTAATCATGG TCATAGCTGT  
5551 TTCCTGTGTG AAATTGTTAT CCGCTCACA TTCCACACAA CATACGAGCC  
5601 GGAAGCATAA AGTGTAAGC CTGGGGTGCC TAATGAGTGA GCTAACTCAC  
5651 ATTAATTGCG TTGCGCTCAC TGCCCGCTTT CCAGTCGGGA AACCTGTCGT  
5701 GCCAGCTGCA TTAATGAATC GGCCAACGCG CGGGGAGAGG CGGTTTGCCT  
5751 ATTGGGCGCT CTTCCGCTTC CTCGCTCACT GACTCGCTGC GCTCGGTCGT  
5801 TCGGCTGCGG CGAGCGGTAT CAGCTCACTC AAAGGCGGTA ATACGGTTAT

FIGURE 18D (SEQ ID NO. 22)

5851 CCACAGAATC AGGGGATAAC GCAGGAAAGA ACATGTGAGC AAAAGGCCAG  
5901 CAAAAGGCCA GGAACCGTAA AAAGGCCGCG TTGCTGGCGT TTTTCCATAG  
5951 GCTCCGCCCC CCTGACGAGC ATCACAAAAA TCGACGCTCA AGTCAGAGGT  
6001 GGCAGAACCC GACAGGACTA TAAAGATACC AGGCGTTTCC CCCTGGAAGC  
6051 TCCCTCGTGC GCTCTCCTGT TCCGACCCTG CCGCTTACCG GATACCTGTC  
6101 CGCCTTTTCTC CCTTCGGGAA GCGTGGCGCT TTCTCAATGC TCACGCTGTA  
6151 GGTATCTCAG TTCGGTGTAG GTCGTTGCT CCAAGCTGGG CTGTGTGCAC  
6201 GAACCCCCCG TTCAGCCCGA CCGCTGCGCC TTATCCGGTA ACTATCGTCT  
6251 TGAGTCCAAC CCGGTAAGAC ACGACTTATC GCCACTGGCA GCAGCCACTG  
6301 GTAACAGGAT TAGCAGAGCG AGGTATGTAG GCGGTGCTAC AGAGTTCCTG  
6351 AAGTGGTGGC CTAACTACGG CTACACTAGA AGGACAGTAT TTGGTATCTG  
6401 CGCTCTGCTG AAGCCAGTTA CCTTCGGAAA AAGAGTTGGT AGCTCTTGAT  
6451 CCGGCAAACA AACCACCGCT GGTAGCGGTG GTTTTTTTGT TTGCAAGCAG  
6501 CAGATTACGC GCAGAAAAAA AGGATCTCAA GAAGATCCTT TGATCTTTTC  
6551 TACGGGGTCT GACGCTCAGT GGAACGAAAA CTCACGTAA GGGATTTTGG  
6601 TCATGAGATT ATCAAAAAGG ATCTTCACCT AGATCCTTTT AAATTAAAAA  
6651 TGAAGTTTTA AATCAATCTA AAGTATATAT GAGTAAACTT GGTCTGACAG  
6701 TTACCAATGC TTAATCAGTG AGGCACCTAT CTCAGCGATC TGTCTATTTT  
6751 GTTCATCCAT AGTTGCCTGA CTCCCCGTCG TGTAGATAAC TACGATACGG  
6801 GAGGGCTTAC CATCTGGCCC CAGTGCTGCA ATGATACCGC GAGACCCACG  
6851 CTCACCGGCT CCAGATTTAT CAGCAATAAA CCAGCCAGCC GGAAGGGCCG  
6901 AGCGCAGAAG TGGTCCTGCA ACTTTATCCG CCTCCATCCA GTCTATTAAT  
6951 TGTTGCCGGG AAGCTAGAGT AAGTAGTTCG CCAGTTAATA GTTTGCGCAA  
7001 CGTTGTTGCC ATTGCTACAG GCATCGTGGT GTCACGCTCG TCGTTTG GTA  
7051 TGGCTTCATT CAGCTCCGGT TCCCAACGAT CAAGGCGAGT TACATGATCC  
7101 CCCATGTTGT GCAAAAAAGC GGTTAGCTCC TTCGGTCCTC CGATCGTTGT  
7151 CAGAAGTAAG TTGGCCGCAG TGTTATCACT CATGGTTATG GCAGCACTGC  
7201 ATAATTCTCT TACTGTCATG CCATCCGTAA GATGCTTTTC TGTGACTGGT  
7251 GAGTACTCAA CCAAGTCATT CTGAGAATAG TGTATGCGGC GACCGAGTTG  
7301 CTCTTGCCCC GCGTCAATAC GGGATAATAC CGCGCCACAT AGCAGAACTT

FIGURE 18E (SEQ ID NO. 22)

7351 TAAAAGTGCT CATCATTGGA AAACGTTCTT CGGGGCGAAA ACTCTCAAGG  
7401 ATCTTACCGC TGTGAGATC CAGTTCGATG TAACCCACTC GTGCACCCAA  
7451 CTGATCTTCA GCATCTTTTA CTTTCACCAG CGTTTCTGGG TGAGCAAAAA  
7501 CAGGAAGGCA AAATGCCGCA AAAAAGGGAA TAAGGGCGAC ACGGAAATGT  
7551 TGAATACTCA TACTCTTCCT TTTTCAATAT TATTGAAGCA TTTATCAGGG  
7601 TTATTGTCTC ATGAGCGGAT ACATATTTGA ATGTATTTAG AAAAATAAAC  
7651 AAATAGGGGT TCCGCGCACA TTTCCCCGAA AAGTGCCACC TGACGTGAC  
7701 GGATCGGGAG ATCTGCTAGG TGACCTGAGG CGCGCCGGCT TCGAATAGCC  
7751 AGAGTAACCT TTTTTTTTAA TTTTATTTTA TTTTATTTT GAGATGGAGT  
7801 TTGGCGCCGA TCTCCCGATC CCCTATGGTC GACTCTCAGT ACAATCTGCT  
7851 CTGATGCCGC ATAGTTAAGC CAGTATCTGC TCCCTGCTTG TGTGTTGGAG  
7901 GTCGCTGAGT AGTGCGCGAG CAAAATTTAA GCTACAACAA GGCAAGGCTT  
7951 GACCGACAAT TGCATGAAGA ATCTGCTTAG GGTTAGGCGT TTTGCGCTGC  
8001 TTCGCGATGT ACGGGCCAGA TATACGCGTT GACATTGATT ATTGACTAGT  
8051 TATTAATAGT AATCAATTAC GGGGTCATTA GTTCATAGCC CATATATGGA  
8101 GTTCCGCGTT ACATAACTTA CGGTAAATGG CCCGCCTGGC TGACCGCCCA  
8151 ACGACCCCCG CCCATTGACG TCAATAATGA CGTATGTTCC CATAGTAACG  
8201 CCAATAGGGA CTTTCCATTG ACGTCAATGG GTGGACTATT TACGGTAAAC  
8251 TGCCCCACTG GCAGTACATC AAGTGTATCA TATGCCAAGT ACGCCCCCTA  
8301 TTGACGTCAA TGACGGTAAA TGGCCCGCCT GGCATTATGC CCAGTACATG  
8351 ACCTTATGGG ACTTTCCTAC TTGGCAGTAC ATCTACGTAT TAGTCATCGC  
8401 TATTACCATG GTGATGCGGT TTTGGCAGTA CATCAATGGG CGTGGATAGC  
8451 GGTTTGACTC ACGGGGATTT CCAAGTCTCC ACCCCATTGA CGTCAATGGG  
8501 AGTTTGTTTT GGCACCAAAA TCAACGGGAC TTTCCAAAAT GTCGTAACAA  
8551 CTCCGCCCCA TTGACGCAAA TGGGCGGTAG GCGTGTACGG TGGGAGGTCT  
8601 ATATAAGCAG AGCTCTCTGG CTAAGTAGAG AACCCACTGC TTACTGGCTT  
8651 ATCGAAATTA ATACGACTCA CTATAGGGAG ACCCAAGCTT

FIGURE 18F (SEQ ID NO. 22)



FIGURE 19 A  
(SEQ ID NO. 23)

pd17-hG1b

GGTACCAATTT	TAAATTGATA	TCTCCTTAGG	TCTCGAGTCT	CTAGATPACC	GGTCAATCGA
CCATGGTTAA	ATTTAACTAJ	AGAGGAATCC	AGAGCTCAGA	GATCTATYGG	CCAGTTAGCT
70	80	90	100	110	120
TTGGAATYCT	TGCGGCGCGT	TGCTTAGCAC	AAGGGCCCAT	CGGTCTTCCC	CCYGGCACCC
AACCTPAAGA	ACGCGGCGGA	ACGATCGTGG	TTCCCGGGTA	GCCAGAAGGG	GGACCGTGGG
130	140	150	160	170	180
TCCCTCCAAGA	GCACCTCTGG	GGGCACAGCG	GCCCTGGGCT	GCCCTGTCAA	GGACTTACTTC
AGGAGGTCT	CGTGGAGACC	CCCGTGTCCG	CGGGACCCGA	CGGACCAGTT	CCTGATGAAG
190	200	210	220	230	240
CCCGAACCGG	TGACGGGTCT	GTTGAACITCA	GGCGCCCTGA	CCAGCGGCGT	GCACACCTTC
GGGCTYGGCC	ACTGCCACAG	CACCTTGAGT	CCGCGGGACT	GGTCGCCGCA	CGTGTGAAG
250	260	270	280	290	300
CCGGCTGTCC	TACAGTCTTC	AGGACTCTAC	TCCCTCAGCA	GCGTGTCTAC	CGTGGCCCTCC
GGCCGACAGG	ATGTCAAGAG	TCCTGAGATG	AGGAGTCTGT	CGCACCAATG	GCACGGGAGG
310	320	330	340	350	360
AGCAGCTTGG	GCACCCAGAC	CTACATCTGC	AACGTGAATC	ACAAGCCCAAG	CAACACCAAG
TGTCGAAC	CGTGGGTCTG	GATGTAGACG	TTCACCTTAG	TGTTGGGGTC	GTTGTGGTTC
370	380	390	400	410	420
GTTGACAAAGA	AAGTGTGTGA	GAGGCCAGCA	CAGGGAGGGA	GGGTGTCTGC	TGGAAGCCAG
CACCTGTCT	TTCACCACT	CTCCGGTCTG	GTCCTTCCCT	CCCACAGACG	ACCTTCGGTC
430	440	450	460	470	480
GCTCAGCCGT	CCTGCCCTGA	CGCATCCCGG	CTATGCAGCC	CCAGTCCAGG	GCAGCAAGGC
CGAGTCCGGA	GGACGGACCT	GCGTAGGGCC	GATACGTCCG	GGTCAAGTCC	CGTGTTCGG
490	500	510	520	530	540
AGGCCCCGTC	TGCCCTCTCA	CCCCGAGGCC	TCTGCCCCGC	CCACTTCATGC	TCAGGGAGAG
TCCGGGGCAG	ACGGAGAGT	GGGCTTCCGG	AGACGGGGCG	GGTGAATACG	AGTCCCTCTC
550	560	570	580	590	600
GGTCTTCTGG	CTTTTTCGCC	AGGCTCTGGG	CAGGCACAGG	CTAGGTGCCC	CTAACCCAGG
CCAGAGAGCC	GAAGAAAGGG	TCCGAGAGCC	GTCCGTGTCC	GATCCACGGG	GATTGGGTCC

FIGURE 19B  
(SEQ ID NO. 23)

pD17-hG1b

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610      620      630      640      650      660
CCCTGCACAC AAAGGGGCG GTGCTGGGCT CAGACCTGCC AAGAGCCATA TCCGGGAGGA
GGGACGTGTG TTTCCCGCTC CACGACCCGA GTCTGGACCG TTCTCGGTAT AGCCCTCCT

670      680      690      700      710      720
CCCTGCCCCCT GACCTAAGCC CACCCCAAG GCCAAACTCT CCACCTCCCTC AGCTCGGACA
GGGACGGGGA CTGGATTCCG GTGGGGTTTC CGGTTTGAGA GGTGAGGAG TCGAGCCTGT

730      740      750      760      770      780
CCTTCTCTCC TCCCAGATTTC CAGTAACTCC CAATCTTCTC TTCTGCAGAGC CCAATCTTTC
GGAAGAAGAG AGGCTCTAAG GTCATTTGAGG GTTAGAAGAG AGACGTCCTG GGTTTAGAAG

790      800      810      820      830      840
TGACAAACTC CACACATGCC CACCGTGCCC AGGTAAGCCA GCCCAGGCTT CGCCCTCCAG
ACTGTTTGA GTGTGTACCG GTGGCACGGG TCCATTCCGT CCGGTCCGGA GCGGAGAGTC

850      860      870      880      890      900
CTCAAGGCGG GACAGTGCC CTAGAGTAGC CTGCATCCAG GGACAGGCC CAGCCGGGTG
GAGTCCCGCC CTGTCCACGG GATCTCATCG GACGTAGTTC CCTGTCCGG GTGCGCCAC

910      920      930      940      950      960
CTGACACGTC CACCTCCATC TCTTCTCAG CACCTGAAT CTTGGGGGA CCGTCAATCT
GACTGTGCAG GTGAGGTAG AGAAGAGTC GTGACTTGA GTGAGGGGA GGCAGTCAGA

970      980      990      1000      1010      1020
TCCCTCTTCCC CCCAAACCC AAGGACACCC TCATGATCTC CCGGACCCCT GAGTCAAT
AGAGAAGGG GGGTTTGGG TTCTCTGGG AGTACTAGAG GGCTGGGGA CTTCAGTCTA

1030      1040      1050      1060      1070      1080
GCGTGTGTGT GAGCGTAGC CACGAAGACC CTGAGGTCAA GTTCAACTGG TACGTGACG
CGCACCAACA CCTGCACTCG GTGCTTCTGG GACTCCAGTT CAAGTTGACC ATGCACCTGC

1090      1100      1110      1120      1130      1140
GCGTGGAGGT GCATTAATGCC AAGACAAGC CGCGGAGGA GCAGTACAAC AGCAGCTACC
CGCACCTCCA CGTATTACGG TTCTGTTTCG GCGCCCTCCT CGTCATGTG TCGTGCAATG

1150      1160      1170      1180      1190      1200
GTGTGTGTAC CGTCCCTACC GTCCCTGACC AGGACTGGCT GAATGGCAAG GAGTCAATCT
CACACCAATC CCAAGAGTGG CAGAGCGTGG TCCTGACCCA CTTAACCGTTC CTCTGCTTCA

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FIGURE 19C  
(SEQ ID NO. 23)

PD17-hG1b

327- 1210 1220 1230 1240 1250 1260  
GCAAGGCTTC CAACAAGCC CTCACAGCC CCAATCAGAA AACCATCTCC AAAGCCAAAG  
CTTCCAGAG GTTGTTCGG GAGGTCGGG GGTACCTCTT TTGTAAGAG TTTCCGTTTC  
1270 1280 1290 1300 1310 1320  
GTGGAGCCCG TGGGTGCGA GGGCCACATG GACAGAGCC GGCTCGGCC ACCCTCTGCC  
CACCCTGGGC ACCCCACGCT CCGGTGTAC CTGTCTCCG CCGAGCCGG TGGAGACCG  
1330 1340 1350 1360 1370 1380  
CTGAGAGTGA CCGCTGTACC AACCTCTGTC CCTACAGGG AGCCCCGAGA ACCACAGTG  
GACTCTACAT GGCACATGG TTGAGACAG GGATGTCCG TCGGGCTCT TGGTGTCCAC  
1390 1400 1410 1420 1430 1440  
TACACCCCTGC CCCCATCCCG GATGAGCTG ACCAAGAACC AGGTCAGCCT GACCTGCTG  
ATGTGGGACG GGGTAGGGC CTAATCTGAC TGGTCTTGG TCCAGTCGGA CTGACGGAC  
1450 1460 1470 1480 1490 1500  
GTCAAAGGCT TCTATCCAG CGACATCGCC GTGAGTGGG AGAGCAATGG GCAGCCGGAG  
CAGTTCCGA AGATAGGGT GCTGTAGCG CACCTCACCC TCTCGTTACC CGTCGGCCTC  
1510 1520 1530 1540 1550 1560  
AACAACTACA AGACCACGCC TCCCGTCTG GACTCCGACG GCTCCTTCTT CCTCTACAG  
TTGTTGAATG TCTGTGCGG AGGCAAGAC CTGAGGCTGC CGAGGAAGAA GGAGATGTG  
1570 1580 1590 1600 1610 1620  
AAGCTACCG TGGACAAGAG CAGGTGGCAG CAGGGGAACG TCTTCTCATG CTCCGTGATG  
TTGAGTGGC ACCTGTCTC GTCCACCGTC GTCCCTTGC AGAAGAGTAC GAGGCACTAC  
1630 1640 1650 1660 1670 1680  
CATGAGGCTC TGCACAACCA CTACAGCGAG AAGAGCTCT CCTGTCTCC GGGTAATGA  
GTACTCCGAG ACGTGTGCT GATGTGCTC TTCTCGAGA GGGACAAGAG CCCATTACT  
1690 1700 1710 1720 1730 1740  
GTGCGAGCG CGGCAAGCC CCGCTCCCG GGCTCTCGG GTCCACAGAG GATGCTTGG  
CAGCTGCGG GCCGTCGGG GCGAGGGG CCGAGAGCG CAGCGTCTC CTACGAACCG  
1750 1760 1770 1780 1790 1800  
ACGTACCCCT TGTACATACT TCCCGGGCGC CCAGCATGGA AATAAAGCAC CCAGCGCTGC  
TGCATGGGG ACATGATGA AGGCGCCCG GGTCTTACT TTAATTCGTG GGTCCGACG

FIGURE 19D  
(SEQ ID NO. 23)

PD17-hG1b

1810	1820	1830	1840	1850	1860
CTGGGCCCC	TGCGAGACTG	TGATGCTTCT	TTCCACGGGT	CAGGCCGAGT	CTGAGGCTTG
GGACCCGGGG	ACGCTCTGAC	ACTACCAAGA	AAGGTGCCCA	GTCCGGCTCA	GACTCCGGAC
1870	1880	1890	1900	1910	1920
AGTGGCATGA	GGGAGGCGA	GCGGGTCCCA	CTGTCCCCAC	ACTGGCCACG	GCTGTGCAGG
TCACCGTACT	CCCTCCGTTCT	CGCCCCAGGGT	GACAGGGGTG	TGACCGGGTC	CGACACGTCC
1930	1940	1950	1960	1970	1980
TGTCCTGGG	CCCCCTAGGG	TGGGGCTCAG	CCAGGGGCTG	CCCTCGGCAG	GGTGGGGAT
ACACGGACCC	GGGGGATCCC	ACCCCGAGTC	GGTCCCCGAC	GGGAGCCGTC	CCACCCCCCTA
1990	2000	2010	2020	2030	2040
TTGCCAGCGT	GGCCCTCCCT	CCAGCAGCAC	CTGCCCTGGG	CTGGGCCACG	GGAAAGCCCTA
AACGCTCGCA	CCGGGAGGGA	GCTCGTCGTG	GACGGGACCC	GACCCGGTGC	CCTTCCGGGAT
2050	2060	2070	2080	2090	2100
GGAGCCCTTG	GGGACAGACA	CACAGCCCTT	GCCTCTGTAG	GAGACTGTCC	TGTTCTGTGA
CCTCGGGGAC	CCCTGTCTGT	GTGTGGGGGA	CGGAGACATC	CTCTGACAGG	ACAAGACACT
2110	2120	2130	2140	2150	2160
GGGCCCCCTG	CCTCCCCGACC	TCCATGCCCA	CTCGGGGGCA	TGCTGGGGAT	GCGGTGGCT
CGCGGGGACA	GGAGGGCTGG	AGGTACGGGT	GAGCCCCCGT	ACGACCCCTA	CGCCACCCCGA
2170	2180	2190	2200	2210	2220
CTATGGCTTC	TGAGGCGGAA	AGAACCAGCT	GGGGCTCTAG	GGGTAATCCC	CACGCGCCCT
GATTAACCGAAG	ACTCCGCCCTT	TCTTGTGTCGA	CCCCGAGATC	CCCCATAGGG	GTGCGGGGGA
2230	2240	2250	2260	2270	2280
GTAAGCGGCG	ATTAAAGCGG	GCGGGTGTGG	TGGTTACGCG	CAGCGTGACC	GCTACACTTG
CATGCCCCCG	TAATTTCGGC	CGCCACACAC	ACCAATGCGC	GTGCACTGG	CGATGTGAAC
2290	2300	2310	2320	2330	2340
CCAGCGCCCT	AGCGCCCGCT	CCTTTCGCTT	TCTTCCCTTC	CTTTCCTGCG	ACGTTTCGCG
GTTCGCGGGA	TGCGGGGCGA	GGAAAGCGAA	AGAAGGGAAG	GAAAGAGCGG	TGCAAGCGCG
2350	2360	2370	2380	2390	2400
GCCTTCCCGG	TCAAGCTCTA	AATCGGGGCA	TCCCTTTAGG	GTTCCGATTT	AGTGCTTTAC
CGAAAGGGGC	AGTTGAGAT	TTAGCCCCGT	AGGAAATCC	CAAGGCTAAA	TCACGAAATG

FIGURE 19E  
(SEQ ID NO. 23)

PD17-hG1b

2410	2420	2430	2440	2450	2460
GGCACCCTCGA	CCCCAAAAA	CTTGATTAGG	GTGATGGTTC	ACGTAGTGG	CCATGCCCT
CCGTGAGCT	GGGGTTTTT	GAACTAATCC	CACTAACCAAG	TGCATCACC	GGTAGCGGA
2470	2480	2490	2500	2510	2520
GATAGACGGT	TTTTGCCCT	TGACGTTGG	AGTCCACGTT	CTTTAATAGT	GGACTCTTGT
CTATCTGCCA	AAAAGCGGA	AACTGCACAC	TCAGGTGCA	GAAATTATCA	CCTGAGACA
2530	2540	2550	2560	2570	2580
TCCAACCTGG	AACAACACTC	AACCCTAATCT	CGGTCTATTTC	TTTTTGATTTA	TAAGGATTT
AGGTTTGACC	TTGTTGTAG	TTGGGATAGA	GCCAGATPAG	AAAACTPAAT	ATTCCCTPAA
2590	2600	2610	2620	2630	2640
TGGGATTTTC	GGCCPATTGG	TTAAAAAATG	AGCTGATTTA	ACAAAAATTT	AACGCCAATT
ACCCCTPAAAG	CCGGATPACC	AATTTTTTAC	TCGACTPAAT	TGTTTTTAAA	TTGCGCTPAA
2650	2660	2670	2680	2690	2700
AATTCTGTGG	AATGTGTGTC	AGTTAGGGTG	TGGAAGTCC	CCAGGCTCCC	CAGGCAAGCA
TTAAGACACC	TTACACACAG	TCAATCCCAC	ACCTTTCAGG	GGTCCGAGGG	GTCCGTCCGT
2710	2720	2730	2740	2750	2760
GAAGTATGCA	AAGCATGCAT	CTCAATTAGT	CAGCAACCAT	AGTCCCGCCC	CTAACTCCGC
CTTCATPACGT	TTCTPACGTA	GAGTTAATCA	GTCTGTGTA	TCAGGGCGGG	GATTGAGCG
2770	2780	2790	2800	2810	2820
CCATCCCCGCC	CCTPACTCCG	CCCAGTTCGG	CCCATTCTCC	GCCCCATGGC	TGACTPAAATT
GGTAGGGCGG	GGATTGAGGC	GGGTCAAGGC	GGGTAAGAGG	CGGGTACC	ACTGATYAAA
2830	2840	2850	2860	2870	2880
TTTTTATTTA	TGCAGAGGCC	GAGGCCGCCCT	CGGCTCTGTA	GCTATTCCAG	AAGTAGTAG
AAAAATAAAT	ACGTCTCCGG	CTCCGGCGGA	GCCGGAAGCT	CGATPAGGTC	TTTCATCACTC
2890	2900	2910	2920	2930	2940
GAGGCTTTTTT	TGGAGGCCCTA	GGCTTTTGA	AAAAGCTTGG	ACAGCTCAGG	GCTGCGAATT
CTCCGAAAAA	ACCTCCGGAT	CCGAAAAAGT	TTTTTCGAAC	TGTCGAGTCC	CGACGCTPAA
2950	2960	2970	2980	2990	3000
CGGCGCAAC	TTGACGGCAA	TCCPAGCGTG	AAGGCTGTA	GGATTTTATC	CCGCGTCCA
GCGCGTTTG	AACTGCCGTT	AGGATCGCAC	TTCCGACCAT	CCTAAAAATAG	GGGCGACGTT

FIGURE 19F  
(SEQ ID NO. 23)

pD17-hG1b

TCATGCTTCG	3010	ACCATTTGAAC	3020	TGCATCGTCG	3030	CCGTGTCCCA	3040	AAATATGGGG	3050	ATTGCCAAGA	3060
AGTACCACAGC	TCGTAACCTG	ACGTAGCAGC	GGCACAGAGT	TTTATACCCC	TAACCGTTCT						
ACGGAGACCT	3070	ACCCTGGCCT	3080	CCGCTCAGGA	3090	ACGAGTTCAA	3100	GTACTTCCAA	3110	AGAAATGACCA	3120
TGCTCTTGGA	TGGGACCCGA	GGCGAGTCCT	TGCTCAAGTT	CATGAAGGTT	TCTTACTGGT						
CAACCTCTTC	3130	AGTGGAGAGT	3140	AAACAGAAATC	3150	TGGTGATTTAT	3160	GGGTAGGAAA	3170	ACCTGGTTCT	3180
GTTGGAGAAG	TCACCTTCCA	TTTGTCTTAG	ACCACTAATA	CCCATCCCTT	TGGACCAAGA						
CCATTTCCTGA	3190	GAAGAAATCGA	3200	CCTTTAAAGG	3210	ACAGAATTAA	3220	TATAGTTCTC	3230	AGTAGAGAAC	3240
GGTAAAGGACT	CTTCTTAGCT	GGAATTTTCC	TGCTTTAATT	ATATCAAGAG	TCATCTCTTG						
TCAAAGAACCC	3250	ACCACGAGGA	3260	GCTCATTTTTC	3270	TTGCCAAAAG	3280	TTTGGATGAT	3290	GCCTTAAAGAC	3300
AGTTTCTTGG	TGGTGCTCCT	CGAGTAAAG	AACGGTTTTC	AAACCTACTA	CGGAATTCCTG						
TTTATTGAACA	3310	ACCGGAATTG	3320	GCAAGTAAAG	3330	TAGACATGGT	3340	TTGGATAGTC	3350	GGAGGCAGTT	3360
AATAACTTGT	TGGCCTTAAC	CGTTCATTTT	ATCTGTACCA	AACCTATCAG	CCTCCGTCAA						
CTGTTTACCA	3370	GGAAGCCATG	3380	AATCAACCAG	3390	GCCACCCTTAG	3400	ACTCTTTGCTG	3410	ACAAAGATCA	3420
GACCAANNGT	CTTTCGGTAC	TTAGTGTGTC	CGGTGAAATC	TGAGAAACAC	TGTTCTTAGT						
TGCAGGAATT	3430	TGAAAGTGAC	3440	ACGTTTTC	3450	CAGAAATTGA	3460	TTTTGGGAAA	3470	TATTAACCTTC	3480
ACGTCCCTAA	ACTTTCAC	TGCCAAAAAG	GTCTTAACT	AAACCCCTTT	ATATTGAAG						
TCCCAGAAATA	3490	CCCAGGCGTC	3500	CTCTCTGAGG	3510	TCCAGAGAGA	3520	AAAAGGCATC	3530	AAGTATTAACT	3540
AGGCTCTTAT	GGGTCCGAG	GAGAGACTCC	AGGTCTCTCT	TTTTCCTAG	TTCAATATCA						
TTGAGTCTTA	3550	CGAGAAGAAA	3560	GACTTAACAG	3570	AAGATGCTTT	3580	CAAGTTCTCT	3590	GCTCCCTCTC	3600
AACCTCAGAT	GCTCTCTCTT	CTGATGTCTC	TTCTACGAAA	GTTCAGAGAG	CGAGGGGAGG						

FIGURE 19C  
(SEQ ID NO. 23)

pD17-hG1b

3610	3620	3630	3640	3650	3660
TAAGCTAATG	CATTTTATTA	AGACCATGG	ACTTTGCTG	GCTTTAGATC	TCTTTGTGAA
ATTTCGATAC	GTAATAATAT	TCTGGTACCC	TGAAAAAGAC	CGAAATCTAG	AGAAACACTT
3670	3680	3690	3700	3710	3720
GGAACCTTAC	TTCTGTGGTG	TGACATAATT	GGACAAACTA	CCTTACAGAGA	TTTAAAGCTC
CCTTGGAAATG	AAGACACCAC	ACTGTATTAA	CCTGTTTGAT	GGATGTCCT	AAATTTTCGAG
3730	3740	3750	3760	3770	3780
TAAGGTAAAT	ATAAATTTT	TAAGTGTATA	ATGTGTTAAA	CTACTGATTC	TAATTTGTTTG
ATTTCATTTA	TATTTTAAAA	ATTACATAT	TACACAATTT	GATGACTAAG	ATTAAACAAC
3790	3800	3810	3820	3830	3840
TGTATTTTAG	ATTCCAACCT	ATGGAAGTGA	TGAATGGGAG	CAGTGTGGA	ATGCCCTTTAA
ACATPAAAAATC	TAAGGTTGGA	TACCTTGACT	ACTTACCCTC	GTCACCACCT	TACGGAATTT
3850	3860	3870	3880	3890	3900
TGAGGAAAAAC	CTGTTTGTCT	CAGAAGAAT	GCCATCTAGT	GATGATGAGG	CTACTGCTGA
ACTCCTTTTG	GACAAAAACGA	GTCCTCTTTA	CGGTAGATCA	CTACTACTCC	GATGACGACT
3910	3920	3930	3940	3950	3960
CTCTCAACAT	TCTACTCCTC	CAAAAAAGAA	GAGAAAGTGA	GAAGACCCCA	AGGACTTTCC
GAGAGTTGTA	AGATGAGGAG	GTTTCTTCT	CTCTTCCAT	CTTCTGGGGT	TCCTGAAAGG
3970	3980	3990	4000	4010	4020
TTTCAGAAATG	CTAAGTTTTT	TGAGTCATGC	TGTCGTTAGT	AATAGAATCT	TTGCTTGCTT
AAGTCTTAAC	GATTCAAAAA	ACTCAGTACG	ACACAAATCA	TTATCTTGAG	AACGAACGAA
4030	4040	4050	4060	4070	4080
TGCTATTTTAC	ACCACAAGG	AAAAAGCTGC	ACTGCTATAC	AAGAAAAATTA	TGGAATAATA
ACGATPAAATG	TGGTGTTC	TTTTTCGACG	TGACGATATG	TTCTTTTAAT	ACCTTTTAT
4090	4100	4110	4120	4130	4140
TTCTGTAAAC	TTTATTAAGTA	GGCATTAACAG	TTTATTAATCAT	AACATACTGT	TTTTTCTTTAC
AAGACATTCG	AAATATTCAT	CCGTATTCGTC	AATATTAAGTA	TTGTATGACA	AAAAAGAATG
4150	4160	4170	4180	4190	4200
TCCACACAGG	CATAGAGTGT	CTGCTATTAA	TTACTATGCT	CAAAAAATTGT	GTACCTTTAG
AGGTGTGTC	GTATCTCACA	GACGATTAAT	ATTGATACGA	GTTTTTAACA	CATGGAATTC

FIGURE 19H  
(SEQ ID NO. 23)

PD17-hG1b

4210	4220	4230	4240	4250	4260
CTTTTAAATT	TGTAAGGGG	TTAATAAG	ATATTGATG	TATAGTCCCT	TGACTAGAGA
GAAAAATTAA	ACATTTCCT	AATTATCTCT	TATAACTTAC	ATATCAGGA	ACTGATCTCT
4270	4280	4290	4300	4310	4320
TCATTAATCAG	CCATACCACA	TTTGTAGAGG	TTTTACTTGC	TTTAAAAAAC	CTCCACAGCC
AGTATTAGTC	GGTATGGTGT	AAACATCTCC	AAAATGAACG	AAATTTTGTG	GAGGTTGTG
4330	4340	4350	4360	4370	4380
TCCCCCTGAA	CCTGAACAT	AAAATGAATG	CAATTGTTGT	TGTTAACTTG	TTTATTTGCAG
AGGGGACTT	GGACTTGTGTA	TTTACTTAC	GTTAACACACA	ACAATTGAAC	AAATTAACGTC
4390	4400	4410	4420	4430	4440
CTTATAATGG	TTTACAATAA	AGCAATAGCA	TCACAAATT	CACAAATPAA	GCATTTTTTTT
GAATATTACC	AATGTTTATT	TCCGTTATCGT	AGTGTTTAA	GTTGTTTATT	CGTAAAAAA
4450	4460	4470	4480	4490	4500
CACTGCATTC	TAGTTGTGT	TTGTCCAAAC	TCATCAATGT	ATCTTATCAT	GTCGTGATCG
GTAACGTAAG	ATCAACACCA	AACAGTTTG	AGTAGTTACA	TAGAATTAGTA	CAGACCTAGC
4510	4520	4530	4540	4550	4560
GCTGGATGAT	CCTCCAGCCG	GGGATCTCA	TGCTGAGTT	CTTCGCCAC	CCCAACTTGT
CGACCTACTA	GGAGTCCG	CCCCTAGAT	ACGACCTCAA	GAAAGGGTG	GGGTTGAACA
4570	4580	4590	4600	4610	4620
TTATTCAGC	TTTATNATGT	TACAATAA	GCAATAGCAT	CACAAATTTT	ACAAATPAAAG
AATPACGTCG	AATATPACCA	ATGTTTATTT	CGTTATCGTA	GTTTTPAAAG	TGTTTATTTT
4630	4640	4650	4660	4670	4680
CAATTTTTTC	ACTGCATTC	AGTTGTGTT	TGTCCAAAC	CATCAATGTA	TCTTATPACATG
GTAATAAAG	TGACGTAAGA	TCAACACCAA	ACAGGTTTGA	GTAATTACAT	AGAAATAGTAC
4690	4700	4710	4720	4730	4740
TCTGTATPACC	GTCGACCTCT	AGCTAGAGCT	TGGCGTAATC	ATGGTCATAG	CTGTTTCTTG
AGACATATG	CAGCTGAGA	TGCACTCTGA	ACCGCATTAG	TACCAATATC	GACAAAGGAC
4750	4760	4770	4780	4790	4800
TGTGAATTTG	TTATCCGCTC	ACAAATCCAC	ACAACATPACG	AGCCGGAAGC	ATPAAAGTGA
ACACTTTAAC	AATAGGCGAG	TGTTAAGTGT	TGTTGTATGCT	TCGGCCTTGC	TATTTCAACAT



FIGURE 191  
(SEQ ID NO. 23)

PD17-hG1b

4810	4820	4830	4840	4850	4860
AAGCCTGGGG	TCGCTAATGA	GTCAGCTAAC	TCACATTAAT	TGCGTTGGC	TCACCTGCCG
TTGCGACCCC	ACGATTAAT	CACTCGATTG	AGTGTAAATTA	ACGCAACGG	AGTACGGGG
4870	4880	4890	4900	4910	4920
CTTTCCAGTC	GGGAACCTG	TCGTGCCAGC	TGCATTAAATG	AATCGGCCAA	CGCGCGGGA
GAAAGGTCAG	CCCTTTGAC	AGCAGGTCG	ACGTAATTAC	TTAGCCGGTT	GCGGCCCTT
4930	4940	4950	4960	4970	4980
GAGCGGTTT	GCCTATTGG	CGCTCTTCC	CTTCCTCGCT	CACCTGACTCG	CTGCGCTCG
CTCCGCCA	CGCATTAACC	GGCAGAAAGC	GAAAGAGCGA	GTGACTGAGC	GACCGAGCC
4990	5000	5010	5020	5030	5040
TCGTTGCGCT	GGCGGAGCG	GTATTCAGTC	ACTCAAGGC	GCTAATACGG	TTATTCACAG
AGCAAGCCGA	CGCGCTCGC	CATAGTCGAG	TGAGTTTCCG	CCATTATGCC	AATAGGTCG
5050	5060	5070	5080	5090	5100
AATCAGGGGA	TAACCGCAGA	AAGAACAATGT	GAGCAAAAGC	CCAGCAAAAG	GCCAGGAAC
TTAGTCCCTT	ATTGCGTCT	TTCTGTGACA	CTCGTTTCC	GTCGTTTTC	CGTCTTGG
5110	5120	5130	5140	5150	5160
GTAAAAAGC	CGCGTTGCTG	GGCTTTTCC	ATAGGCTCCG	CCCCCTGAC	GAGCATACACA
CATTTTCCG	GGCAGACGAC	CGCAAAAAGG	TATCCGAGGC	GGGGGACTG	CTCGTAATGT
5170	5180	5190	5200	5210	5220
AAAATCGACG	CTCAAGTCAG	AGGTGGCGAA	ACCCGACAGG	ACTATTAAGA	TACCAAGCGT
TTTTAGCTGC	GAGTTCAGTC	TCCACCGCTT	TGGGCTGTCC	TGATATTTC	ATGTCGCCA
5230	5240	5250	5260	5270	5280
TTCCCCCTTG	AAGCTTCCTC	GTGCGCTCTC	CTGTTCGAC	CCTGCCGCTT	ACCGGATACC
AAGGGGACC	TTGAGGGAG	CACCGAGAG	GACAAGGCTG	GGACGGCGAA	TGGCTATGG
5290	5300	5310	5320	5330	5340
TGTCGCGCTT	TCCTCCCTTC	GGAAGCGTGG	CGCTTCTCA	ATGCTCACGC	TGTAAGTATC
ACAGGCGGAA	AGAGGGAAG	CTTTCGCACC	GCGAAAGAGT	TACGAGTGG	ACATCAATAG
5350	5360	5370	5380	5390	5400
TCAGTTCCGT	GTAGGTCGTT	CGCTCCAAGC	TGGGCTGTGT	GCACGAACCC	CCCGTTACAG
AGTCAAGCCA	CATCAAGCA	GCGAGTTTC	ACCCGACACA	CGTGCTTGG	GGGCAAGTCG

FIGURE 19J  
(SEQ ID NO. 23)

pD17-hG1b

5410	5420	5430	5440	5450	5460
CCGACCGCTG	CCGCTTATCC	GGTAACATATC	GTCTTGAGTC	CAACCCGGTA	AGACACGACT
GGCTGGCGAC	GGGAAATAGG	CCATTGATAG	CAGAACTCAG	GTGGGCCAT	TCTGTGCTGA
5470	5480	5490	5500	5510	5520
TATCGCCACT	GGCAGCAGCC	ACTGCTAACA	GGATTAGCAG	AGCGAGGTAT	GTAGGCGGTG
ATAGCGGTGA	CCGTGCTCGG	TGACCATTTGT	CCTAATCGTC	TGCTTCATTA	CATCCGCCAC
5530	5540	5550	5560	5570	5580
CTACAGAGTT	CTTGAAGTGG	TGGCCTTAAT	ACGGCTACAC	TAGAAGGACA	GTATTTTGGTA
GATGTCACAA	GAACCTTCACC	ACCGGATTGA	TGCCGATGTG	ATCTTCTGT	CAATAAACCAT
5590	5600	5610	5620	5630	5640
TCTGCGCTCT	GCTGAAGCCA	GTTACCTTTCG	GAAAAAGAGT	TGGTAGCTCT	TGATCCGCCA
AGACGGCAGA	CGACTTCGGT	CAATGGAAGC	CTTTTCTCTCA	ACCATCGAGA	ACTAGGCCGT
5650	5660	5670	5680	5690	5700
AACAACCCAC	CGCTGGTAGC	GGTGGTTT	TTGTTTGCAA	GCAGCAGATT	ACGGCGAGAA
TTGTTTGTTG	GGGACCATCG	CCACCAAAAA	AACAACGTT	CGTGTCTTAA	TGCGCGTCTT
5710	5720	5730	5740	5750	5760
AAAAAGGATC	TCAAGAAGAT	CCTTTGATCT	TTTCTACGGG	GTCTGACGCT	CAGTGAACG
TTTTCCTTAG	AGTTCCTTCA	GGAACTAGA	AAAGATGCC	CAGACTGCGA	GTACACTTGC
5770	5780	5790	5800	5810	5820
AAACCTCAGC	TTAAGGATT	TTGGTCATGA	GATTATCAAA	AAGGATCTTC	ACCTAGATTCC
TTTTCGAGTCC	AATTCCCTAA	AACCACTACT	CTAATAGTTT	TTCTTAGAAG	TGGATCTAGG
5830	5840	5850	5860	5870	5880
TTTTAATTTA	AAAATGAAGT	TTTTAATCAA	TCTAAAGTAT	ATATGAGTAA	ACTTGTCTTG
AAAAATTAAAT	TTTTTACTTCA	AAATTAGTT	AGATTTCATA	TATACTCATT	TGAACACAGAC
5890	5900	5910	5920	5930	5940
ACAGTTACCA	ATGCTTAATC	AGTAGGCGAC	CTATCTCAGC	GATCTGTCTA	TTTTCGTTTAT
TGTCATATGGT	TACGATTTAG	TCACTCCGTG	GATAGAGTGG	CTAGACAGAT	AAAGCAAGTA
5950	5960	5970	5980	5990	6000
CCATAGTTGC	CTGACTCCCC	GTGCTGTAGA	TAACTPACGAT	ACGGGAGGGC	TTACCATCTG
GGTATCAACG	GACTGAGGGG	CAGCACATCT	ATTGATGCTA	TGCCCTCCCG	AATGGTAGAC

FIGURE 19K  
(SEQ ID NO. 23)

pD17-hG1b

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6010      6020      6030      6040      6050      6060
GCCCCAGTGC TGCATGATA CCGGAGACC CACGCTCACG GCGTCAGAT TTATCAGCAA
CGGGGTACG ACGTACTAT GCGCTCTGG GTGCGAGTG CCGAGTCTA AATAGTCGT

6070      6080      6090      6100      6110      6120
TAAACCAAGC AGCCGGAAG GCCGAGCGA GAAGTGTCC TCGAATTTA TCCGCTCCA
ATTGGTCGG TCGCCTTCC CGGCTCGCG CTTCACCAGG ACGTTGAAAT AGCGGAGGT

6130      6140      6150      6160      6170      6180
TCCAGTCTAT TAATGTGTC CGGGAAGCTA GAGTAACTAG TTCGCCAGTT AATAGTTGC
AGGTCAGATA ATTAACAACG GCCCTTCGAT CTCATTCAAT AAGCGTCAA TTATCAAACG

6190      6200      6210      6220      6230      6240
GCAACGTTGT TGCATTTGCT ACAGGCATCG TGGTGTACG CTCGTCTTT GGTATGCTT
CGTTGCAACA ACGGTAAACG TGTCCGTAGC ACCACAGTGC GAGCAGCAA CCATACCGAA

6250      6260      6270      6280      6290      6300
CATTCAGCTC CGGTTCCCAA CGATCAAGGC GAGTTACATG ATCCCCCATG TTGTGCAAAA
GTAAGTCGAG GCCAAGGTT GCTAGTCCG CTCATGTAC TAGGGGGTAC AACACGTTTT

6310      6320      6330      6340      6350      6360
AAGCGGTTAG CTCCTTCGGT CCTCCGATCG TTGTCAAGAG TAAGTTGGCC GCAGGTATAT
TTCCGCAATC GAGGAAGCCA GGAGGCTAGC AACAGTCTTC ATTCAACCGG CGTCACAATA

6370      6380      6390      6400      6410      6420
CACTCAATGT TATGGCAGCA CTGCATTAAT CTCTTACTGT CATGCCATCC GTAAGATGCT
GTGAGTAACCA ATACCGTCTG GACGTATTAA GAGAATGACA GTACGGTAGG CATTCACGA

6430      6440      6450      6460      6470      6480
TTTCTGTGAC TGGTAGTAC TCAACCAAGT CATTCGTAGA ATAGTGTATG CGGCGACCGA
AAAGACACTG ACCACTCATG AGTTGGTTCA GTAAGACTCT TATCACAATAC GCCGCTGGCT

6490      6500      6510      6520      6530      6540
GTTGCTCTTG CCGGCGCTCA ATACGGGATA ATACCGCGCC ACATAGCAGA ACTTTAAAG
CAACGAGAAC GGGCCGCACT TATGCCCTAT TATGGCGCGG TGTATCGTCT TGAATTTTC

6550      6560      6570      6580      6590      6600
TGCTCATCAT TGGAAACGT TCTTCGGGGC GAAAACTCTC AAGGATCTTA CCGCTGTGA
ACGAGTAATA ACCTTTGCA AGAAGCCCG CTTTGTAGAG TTCTAGAAT GGCACAACT
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FIGURE 19L  
(SEQ ID NO. 23)

pD17-hG1b

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6610      6620      6630      6640      6650      6660
GATCCAGTTC GATGTAAACC ACTCGTCAC CCACTGATC TTCAGCATCT TTTACTTTCA
CTAGGTCAAG CTACATTGGG TGAGCACGTG GGTGACTAG AAGTCGTAGA AAATGAAAGT

6670      6680      6690      6700      6710      6720
CCAGCGTTTC TGGGTGAGCA AAAACAGGAA GGCAAAATGC CGCAAAAAG GGAATTAAGG
GGTCGCAAAG ACCCACTCGT TTTTGTCCTT CCGTTTACG GCGTTTTC CCTTATTTCC

6730      6740      6750      6760      6770      6780
CGACACGGAA ATGTTGAATTA CTCATCTCTT TCCTTTTCA ATATTATTGA AGCATTTATC
GCTGTCCTTT TACAACCTTAT GAGTATGAGA AGGAAAAAGT TATATTAAC TCGTAATAAG

6790      6800      6810      6820      6830      6840
AGGCTTATTG TCTCATGAGC GGATACATAT TTGATGTAT TTAGAAAAAT AAACAATAG
TCCCAATTAAC AGAGTACTCG CCTATGTATA AACTTACATA AATCTTTTA TTGTTTATC

6850      6860      6870      6880      6890      6900
GGGTTCGCG CACATTTCCT CGAAAAGTGC CACCTGACGT CGACGGATCG GGAGATCTGC
CCCAAGCGCG GTGTAAGGG GCTTTTCACG GTGACTGCA GCTGCCTAGC CCTCTAGAC

6910      6920      6930      6940      6950      6960
TAGGTGACCT GAGGCGCGCC GGCTTCGAAT AGCCAGAGTA ACCTTTTTT TTTAATTTTAT
ATCCACTGGA CTCCGCGCG CCGAAGCTTA TCGGTCTCAT TGGAAAAAA AATTAAAAATA

6970      6980      6990      7000      7010      7020
TTTTATTATT TTTTGAGATG GAGTTTGGC CCGATCTCCC GATCCCCAT GGTCGACTCT
AAATAAAAATA AAAACTCTAC CTCAAACCGC GGCTAGAGGG CTAGGGGATA CCAGCTGAGA

7030      7040      7050      7060      7070      7080
CAGTACAATC TGCTCTGATG CCGCATAGTT AAGCCAGTAT CTGCTCCCTG CTTGTGTGTT
GTCAATGTAG ACGAGACTAC GCGGTATCAA TTGCGTCATA GACGAGGAC GAACACACAA

7090      7100      7110      7120      7130      7140
GGAGTTCGCT GAGTAGTGC CGAGCAAAAT TTAAGCTACA ACAAGGCAAG GCTTGACCGA
CCTCCAGCGA CTCATCACGC GCTCGTTTAA AATTCGATGT TGTTCGTTT CGAACTGGCT

7150      7160      7170      7180      7190      7200
CAATTGCATG AAGAATCTGC TTAGGGTTAG GCGTTTTCG CTGCTTCGCG ATGTACGGGC
GTTAACGTAC TTCCTTAGACG ATCCCAATC CGCAAAACGC GACGAAGCGC TACATGCCCC
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FIGURE 19M  
(SEQ ID NO. 23)

pD17-hG1b

7210	7220	7230	7240	7250	7260
CAGATATACG	CGTTGACATT	GATTATTGAC	TAGTTATTAA	TAGTAATCAA	TTACGGGGTC
GTCCTATATGC	GCAACTGTAA	CTAATAACTG	ATCATAAATT	A1CATTTAGTT	AATGCCCCAG
7270	7280	7290	7300	7310	7320
ATTAGTTTCA	AGCCCATATA	TGGAGTTCCG	CGTTACATAA	CTTACGGTAA	ATGCCCCGCC
TAATCAAGTA	TGGGGTATAT	ACCTCAAGGC	GCAATGTATT	GAATGCCATT	TACCGGGCGG
7330	7340	7350	7360	7370	7380
TGGCTGACCG	CCCAACGACC	CCCCGCCATT	GACGTCAATA	ATGACGTAAG	TTCCCATAGT
ACCGACTVGG	GGGTGCTGG	GGGCGGGTAA	CTGCAGTTAT	TACTGCATTAC	AAGGTAATCA
7390	7400	7410	7420	7430	7440
AACGCCAATA	GGGACTTTCC	ATTGACGTCA	ATGGGTGAC	TATTTTACGGT	AAACTGCCCA
TTGCGGTTAT	CCCTGAAGG	TAACTGCAGT	TACCCACCTG	ATAAATGCCA	TTTGACGGGT
7450	7460	7470	7480	7490	7500
CTTGGCAGTA	CATCAAGTGT	ATCATATGCC	AAGTACGGCC	CCTATTGACG	TCAATGACGG
GAACCGTCAT	GTAGTTACA	TAGTATACGG	TTTCATGCGG	GGATAACTGC	AGTTACTGCC
7510	7520	7530	7540	7550	7560
TAAATGGCCC	GCCTGGCATT	ATGCCCAGTA	CATGACCTTA	TGGGACTTTTC	CTPACTTGGCA
ATTTACCCTGG	CGGACCTTAA	TACGGGTTCAT	GTACTGGAAT	ACCTGGAAG	GATGAACCGT
7570	7580	7590	7600	7610	7620
GTACATCTTAC	GTATTAGTCA	TCCCTATTAC	CATGGTGATG	CGGTTTGGC	AGTACATCAA
CATGTAGATG	CATTAATCAGT	AGCGATAATG	GTACCACTAC	GCCAAAACCG	TCACTAGATT
7630	7640	7650	7660	7670	7680
TGGGCGTGA	TAGCGTTTG	ACTCAGGGGG	ATTTCGAAGT	CTCCACCCCA	TTGACGTCAA
ACCCGCACCT	ATCGCCAAAC	TGAGTGCCCC	TAAAGGTTCA	GAGGTGGGGT	AAC1GCAATT
7690	7700	7710	7720	7730	7740
TGGGAGTTTG	TTTTGGCACC	AAAAATCAACG	GGACTTTTCCA	AAATGTCTGA	ACAAC1CCGC
ACCC1CAANC	AAAACCGTGG	TTTTAGTTGC	CCTGAAAGGT	TTTACAGCAT	TGTTGAGCGG
7750	7760	7770	7780	7790	7800
CCCATTTGACG	CAATATGGCG	GTAGCGCTGT	ACGGTGGGAG	GTCTATATATA	GCAGAGCTCT
GGCTAACTGC	CTTTACCCGC	CATCCGCACA	TGCCACCCCTC	CAGATATATTT	CGTCTCGAGA

FIGURE 19N  
(SEQ ID NO. 23)

PD17-hG1b

7810	7820	7830	7840	7850	7860
CTGGCTTAACT	AGAGAACCCCA	CTGCTTACTG	GCTTATCGAA	ATTATATACGA	CTCAGTATATAG
GACCGATTGA	TCTCTTGGGT	GACGAATGAC	CGAATAGCTT	TAATTATGCT	GAGTGATATC
7870	7880				
GGAGACCCCAA	GCTT				
CCTCTGGGTT	CGAA				

Figure 26

## hBR96-2 Heavy Chain Variable Region (VH)

1                    11                    21                    31                    41  
 EVQLVESGGG LVQPGGSLRL SCAASGPFPS DYMYWVRQA PGKGLEWVSY  
 51                    61                    71                    81                    91  
 ISQDGDITDY ADSVKGRFTI SRDNAKNSLY LQMNSLRDED TAVYYCARGL  
 101                    111  
 ADGAWFAYWG QGTLVTVSS (SEQ ID NO. 24)

## human IgG1 constant

CH1  
 A STKGPSVFPL APSSKSTSGG TAALGCLVKD  
 YFPEPVTQSW NSGALTSGVH TFPVQLQSSG LYSLSSTVTV PSSSLGTQTY  
 ICNVNKKPSN TKVDKKVEPK SCDKTHCTCP CH2 132 133 134 SVFLFPPKPK  
 DTLNISRTPE VTCVVVDVSH EDPEVKFNWY VDGVEVHNAK TKPREEQYNS  
 TYRVSSTLTQ LHQDWLNK 318 320 322 YKDKVSNKAL 331 332 CH3 AKGQPREPQV  
 YTLPPSRDEL TKNQVSLTCL VKGFYPSDIA VEWESNGQPE NNYKTTTPVL  
 DSDGSFFLYS KLTVDKSRWQ QGNVFSCSVM HEALHNHYTQ KSLSLSPGK  
 (SEQ ID NO. 25)

Figure 27

## hBR96-2A: Heavy Chain Variable Region (VH)

1 11 21 31 41  
EVQLVESGGG LVQPGGSLRL SCAASGFPFS DYYMYWVRQA PGKGLEWVS  
51 61 71 81 91  
ISQDGDITDY ADSVKGRFTI SRDNAKNSLY LQMNSLRDED TAVYYCARGL  
101 111  
ADGAWFAYWG QGTLVTVSS (SEQ ID NO. 24)

hBR96-2A: Human Heavy Chain IgG1 Constant Region  $\Delta$ CH2

A STKGPSVFPL APSSKSTSCG TAALGCLVKD YFPEPVTVSW NSGALTSGVH  
TFPAVLQSSG LYSLSVVTV PSSSLGTQTY ICNVNKKPSN TKVDKKVEPK  
SCDKTHTCPP CP GQPREPQV YTLPPSRDEL TKNQVSLTCL VKGFYPSDIA  
VEWESNGQPE NNYKTTTPVL DSDGSFFLYS KLTVDKSRWQ QGNVFSCSV  
HEALHNHYTQ KSLSLSPGK (SEQ ID NO. 26)



## Figure 28

This sequence is the chi BR96 IgG1 with CH2 deleted.

VH  
1 EVNLVESGGG LVQPGGSLKV SCVTSGFTFS DYYMYWVRQT PEKRLEWVAY  
51 ISQGGDITDY PDTVKGRFTI SRDNAKNTLY LQMSRLKSED TAMYICARGL  
101 DDGAWFAYWG QGTLVTVSVA STRGPSVFPL APSSKSTSGG TAALGCLVKD  
151 YFPEPVTVSW NSGALTSGVH TFPVAVLQSSG LYSLSVVTV PSSSLGTQTY  
201 ICNVNHKPSN TKVDKKVEPK SCDKTHTCPP CH<sup>3</sup>QPREPQV YTLPPSRDEL  
251 TKNQVSLTCL VKGFYPSDIA VEWESNGQPE NNYKTTPFVL DSDGSFFLYS  
301 KLTVDKSRWQ QGNVFSCSVN HEALHNHYTQ KSLSLSPGK

(SEQ ID NO. 27)